

MOTOR AGE

Vol. XLVIII
Number 3

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CHICAGO, JULY 16, 1925

Thirty-five Cents a Copy
Three Dollars a Year

To maintain a fair and competitive price schedule so that the dealer may compete successfully in his community and make a good profit ~ ~ ~

The Goodrich 10 points of profit

- 1— A product of honest value.
- 2— Marketing through dealers.
- 3— Dealers of good standing.
- 4— Safe and permanent supply.
- 5— Dealer advertising support.
- 6— Protection of Dealers established trade.
- 7— A tire for every transportation need.
- ✓ 8— Fair and competitive price schedule.
- 9— Original equipment program with car manufacturers.
- 10— Square deal in all transactions.

THERE is plenty of interest for the tire merchant in Point Eight of the Goodrich Points of Profit. It signifies that the Goodrich price schedule gives a dealer a comfortable margin on which to operate. He can meet the price issue with anyone in his territory, and make a profit on which a business can thrive.

Read the other Goodrich Points of Profit. They form a background absolutely necessary to a fair and competitive price schedule which assures a permanent and profitable business.

THE B. F. GOODRICH RUBBER COMPANY

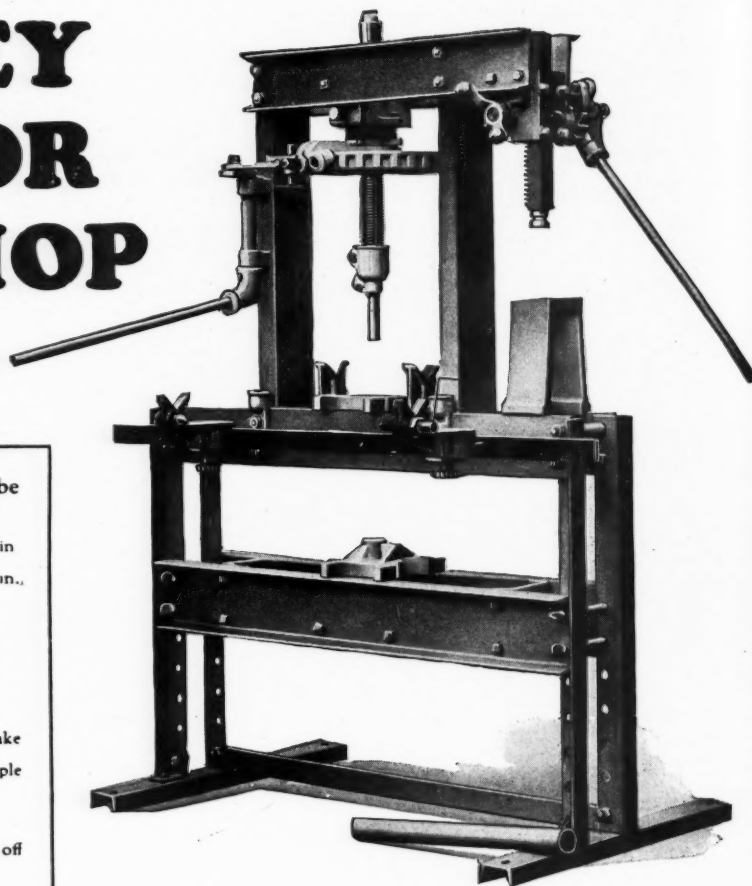
Established 1870

Akron, Ohio

Goodrich Tires

"Best in the Long Run"

A MANLEY PRESS FOR EVERY SHOP

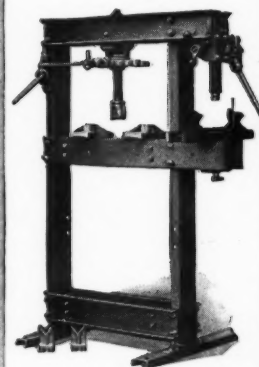


21 Operations on the Ford car that can be performed with a Manley Press

1. Pressing steering spindle body bushings out and in.
2. Pressing steering arm bushings out and in.
3. Pressing lower steering column bushings out and in.
4. Straightening steering drag link.
5. Straightening front axle.
6. Pressing wheel hubs out and in wheel.
7. Pressing timing gear off and on camshaft.
8. Pressing timing gear off and on crankshaft.
9. Pressing gear off and on generator.
10. Straightening camshaft.
11. Straightening crankshaft.
12. Pressing piston pin bushings out and in piston.
13. Pressing bushings out and in transmission brake drums.
14. Pressing bushings out and in transmission triple gears.
15. Pressing differential axle gears off and on axles.
16. Straightening rear axle shafts.
17. Straightening rear axle shaft housing.
18. Pressing drive shaft pinion roller bearing sleeve off and on.
19. Straightening drive shaft.
20. Straightening drive shaft housing.
21. Pressing spring hanger bushings out and in.

12 REASONS WHY THE MANLEY PRESS IS PREFERRED:

1. Excess capacity: Manley ratings are very conservative and all Manley equipment has a much greater capacity than the Manley ratings indicate.
2. Exposed screw: The Manley Press is arranged so that the end of the screw is exposed and the Press is designed so that you may jar stubborn parts loose by a hammer blow on this exposed screw end, giving the effect of as much as a hundred ton straight pressure.
3. Open construction makes it possible to handle work of any length.
4. Extra wide clearance on lower table (42 inches).
5. Double table saves time adjusting table for work of different heights, long nose and short nose supplied with Press, this also saves time adjusting for height.
6. High speed Rack and Pinion Press Attachment. Two men can work on this Press at the same time.
7. Hand wheel mounted on ball bearings.
8. Hand levers in most convenient position, enabling operator to keep eyes on work.
9. Quick change of leverages and speeds.
10. Correctly lubricated.
11. Designed by R. E. Manley and guaranteed by The Manley Mfg. Co.
12. Price \$100.00 without Rack and Pinion Press or Crankshaft Straightening Attachment. With Rack and Pinion Press and Crankshaft Straightening Attachment \$145.00.



For the smaller shops the 20 Ton Manley Press is recommended; complete with Rack and Pinion Press and Crankshaft Straightening Attachment \$104.00.

Get a Manley

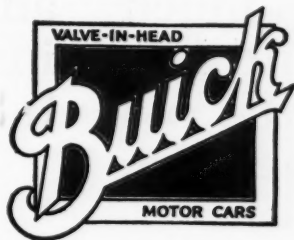
THE MANLEY MFG. CO., YORK, PA.

Buy from your
own jobber.

Buick is a name
that always finds
an audience and
Buick dealers are
always able to
get a hearing
from a buyer.
That's one of
many reasons
why Buick
dealers are so
successful.

*Those desiring
the Buick franchise
should have their
names on file.*

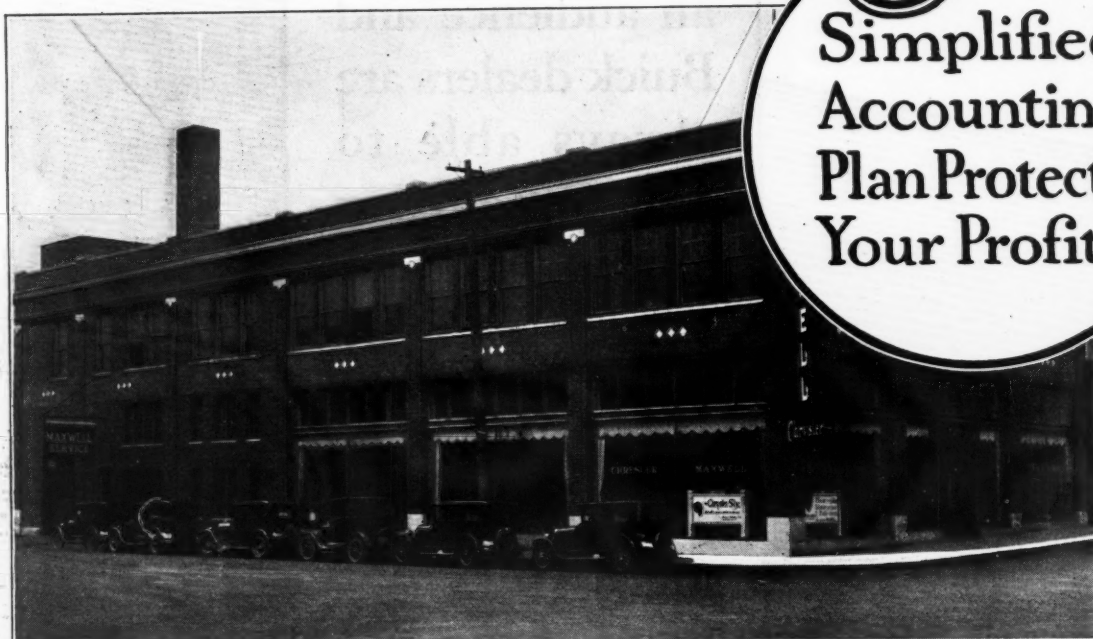
BUICK MOTOR CO. FLINT, MICH.
Division of General Motors Corporation
Pioneer Builders of Valve-in-Head Motor Cars
Branches in All Principal Cities
Dealers Everywhere



WHEN BETTER AUTOMOBILES ARE BUILT, BUICK WILL BUILD THEM

Burroughs

Simplified
Accounting
Plan Protects
Your Profits



"Tells Our Profit Daily"

"The Burroughs Simplified Accounting Plan for garages tells us our net profits for each department daily. It is much more accurate and less expensive than the old 'pen and ink' method.

It is one of the controlling factors in the present excellent condition of our business and I have no hesitation in giving it my endorsement."

—Reilly-Craig Company, Inc.
Automobile Distributors, Minneapolis, Minn.

Burroughs Adding Machine Co.,
626 Second Blvd.,
Detroit, Michigan.

Please send me the folder—"Here's
How We Steered to Prosperity."

Name

Business

Address

Let us show you how thousands of automobile and accessory dealers use this plan. Phone our local office or write for folder—"Here's How We Steered to Prosperity."

BURROUGHS ADDING MACHINE COMPANY
DETROIT, MICHIGAN

ADDING · BOOKKEEPING · CALCULATING AND BILLING MACHINES

MOTOR AGE

Reg. U. S. Pat. Office

Vol. XLVIII

No. 3

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Subscriptions accepted only from the Automotive Trade
Entered as Second Class Matter Sept. 19, 1899, at the Post Office at Chicago, Ill., under Act of March 6, 1879.

It used to take about a week
To fix a radiator leak;
But now it takes about a
minute—
You simply pour
SE-MENT-OL in it.

SE-MENT-OL

has been "finding
leaks and fixing them"
for fifteen years. Made
in two easy-to-buy,
easy-to-sell sizes. Ford
size 50c. Standard
size 75c.



SE-MENT-OL
REG. U. S. PAT. OFF.
LIQUID
CONTENTS 10 OZS.
NORWESCO
THE Chemically Correct
TRADE MARK REG. U. S. PAT. OFF.
RADIATOR CEMENT

NORWESCO
Marietta, Ohio.
Toronto, Ont.

*The
"Chemically
Correct"
Line*



The Profit Paying Bus for City Service—

*Miller-Built
Body*

*Studebaker
Big Six Chassis*

MODEL M Metropolitan Pay-Enter Type Bus is ideal equipment for city service, where stops are frequent. It is so designed that the driver can control his bus, collect fares and oversee the entrance and exit of all passengers without leaving his seat.

This bus gives comfortable seats to 21, exclusive of the driver, and the wide center aisle and 74" height afford ample room for a large number of standees. The balance in the body has been carefully considered to insure against side sway. The interior is equipped with all the usual Pay-Enter appointments.

This Miller-built body is mounted on the new Studebaker bus chassis, designed for Miller-built bus bodies. This combination assures the operator dependable, comfortable, *economical* transportation.

Write for complete details, specifications, prices, etc., on Model M and other Miller-built, Studebaker-chassied buses.

The A. J. MILLER CO.
BELLEFONTAINE, OHIO



This symbol means that Studebaker prices do not include the profit of outside body-makers

UNDOUBTEDLY, the one outstanding reason for Studebaker's great success is the fact that only one manufacturing profit is included in Studebaker prices. This means *extra* value for the buyer, and an important sales advantage for the dealer. And Studebaker dealers know that the cars they sell this July will not be last year's models in August.

THE STUDEBAKER CORPORATION
OF AMERICA
SOUTH BEND, INDIANA

T H I S I S A S T U D E B A K E R Y E A R

Coming!
New Models



NASH

*Wait till
next week*


RAMCO


Make Piston Rings Permanently Elastic

RAMCO Cushion Inner Rings are correctly engineered to maintain the elasticity of any good piston ring. Through actual use and severe tests, thousands of dealers have sold themselves on Ramcos.

Everyone with mechanical knowledge knows that piston rings take a "permanent set" shortly after installation, owing to motor heat. Ramcos, made of special analysis steel, withstand the heat and constantly give renewed elasticity to the piston ring as it is needed to compensate for wear. That is their purpose.

Ramcos permanently stop oil-pumping, oil-dilution and poor compression. They also eliminate piston slap by centralizing the piston. No other inner ring will do these things without a harsh tension.

Use a Ramco With Every New Piston Ring

That's the way to add an extra profit and build customer satisfaction. Prevent or stop oil-pumping and piston slap. It's the crying need today in the automobile field—and you can "cash in on it" with Ramcos.


Order From Your Jobber or Direct

RAMCO

Cushion

INNER RINGS

REG. U.S. PAT. OFF.

RAMSEY ACCESSORIES MFG. CORP.
St. Louis, Mo.


*Ramcos Give
What Heat and
Wear Take
Away*

*Ramcos Give
Old Motors
New Life*

*Ramcos Stop
Oil-Pumping
and
Piston Slap*

*Shallow
Grooves
Accommodate
Only Ramcos*

*Ramcos Are
Designed by
the Best
Engineers*

*Use Ramcos
With Ford
Eccentric
Rings*

*Overcome the
Loose Joint in
All Motors*

*Ramcos
Cushion the
Piston and
Piston Ring*

*Only Ramcos
Are Hexagon
In Design*

*Ramcos Are
Cut to
Piston Size*

*All Ramco
Designs Are
Fully Patented*

*An Extra
Profit on
Every Piston
Ring Sale*



When Walter P. Chrysler applied to the Chrysler Four the same advanced engineering, quality manufacture and fine materials which make the Chrysler Six the most sought after selling proposition in its field, he multiplied overnight the profit possibilities of the Chrysler franchise. Already, the public enthusiasm for this finer expression of four-cylinder motoring has attracted the attention of the country's shrewdest merchandisers. Your application for this valued franchise will be handled confidentially. We suggest you prepare for a possible opportunity in your vicinity by writing or seeing us at once.

All Chrysler dealers are in position to extend the convenience of time-payments, on a plan that is attractive to the buyer.

CHRYSLER SALES CORPORATION, DETROIT, MICH.
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONTARIO

The New
CHRYSLER FOUR

MOTOR AGE

Vol. XLVIII

July 16, 1925

No. 3

Summary and Index of Important Events in **This Week's Automotive News**

*Detailed Stories from MOTOR AGE Staff Writers and Special
Correspondents Appear in News Section Beginning on Page 32*

REGISTRATIONS of automobiles in United States gain 13.7 per cent in first six months of 1925, survey shows Page 32.

Peter de Paolo, winner of Indianapolis speedway event May 30, wins Baltimore-Washington 250-mile inaugural. Page 32.

Ford sales in June show increase of about 6,000 cars over record month a year ago. Page 33.

President Henry announces that the American Automobile Association will continue its bus division despite upheaval at recent convention. Page 43.

Hare & Chase, automobile finance company, issues statement condemning unsound finance methods allowing small down payment on purchase of new car. Page 37.

Sales of windshield wings point to revival of interest in open automobile models. Page 37.

Sales of Mack buses for first half of 1925 increase 433 per cent as compared to same period of 1924. Page 33.

Dealers in Atlanta sponsor a joint advertising contest with prizes for identification of pictures in newspaper page. Page 35.

Duesenberg sales are reported on upward trend with many dealerships being requested as result of De Paolo's victory at Indianapolis race. Page 35.

Marmon sales in June are double those of the same month last year, records show. Page 43.

Ralph De Palma wins opening race at Rockingham Park Speedway in New Hampshire against field of eleven. Event marks revival of New England race interest. Page 3.

Scientists pronounce crude oil airplane engine without spark plugs is practicable in principle. Page 36.

Toledo reports June business better than 1924 sales although volume is not up to record set in May. Page 38.

Hattiesburg, Miss. is the first town in the state to discard its street car lines in favor of motor buses. Others expected to follow. Page 42.

Indianapolis Real Estate Board gets behind project to establish airport in their city with result that favorable action seems assured. Page 38.

Meeting of Ohio council of N. A. D. A. will stick to discussions of retail sales, operating expenses, service and management. Page 39.

Deed of sale of Maxwell properties to Chrysler Corporation is recorded at Detroit. Page 39.

Alabama Automotive Trades Association getting stage set for its annual convention July 20-21. Page 42.

Volume storage business is developed for Seattle garage by use of "Tag boy" service. Page 38.

Hudson-Essex plans expansion of dealerships in Spokane, Wash., distributing territory. Page 36.

In Next Week's Issue—Common Sense in the Saddle

Write It While Sitting on the Running Board

An Article on Used Car Advertising

By CLARENCE PHILLIPS

*Tell 'Em
and
Sell 'Em*

HOW to write a used car advertisement that will "pull" is always an interesting subject. In fact, there are a great many dealers in this country who would give a lot to obtain such a formula.

Many of them feel that too much of their used car advertising effort is thrown away and there are few who seem able to analyze the problem in a manner that will enable them to put their used car insertions on a more profitable basis. It is a hard job to check up on results realized through this sort of promotion.

Let it be said right here, though, that it is not the intention of this article to lay down a set of magic rules to be followed in successful used car advertisement writing. Far be it. There are two fundamental elements necessary to proper procedure, however, that will be submitted.

The first is: Make a first hand, careful study of the car to be described.

The second is: Don't be too niggardly with space for the description. Help the shopper visualize.

A better way yet to express the idea would be to put the two thoughts in the words of Edward C. O'Donnell, of the Lord & Thomas advertising organization, who writes used car copy for the New York Branch of Studebaker.

"When I write a used car ad," said Mr. O'Donnell, "I do the work, figuratively speaking, while sitting on the running board. I deal with each car as an individual proposition."

"Tell 'em and sell 'em"—he said further, is the guiding slogan of his work.

This last terse phrase constituted the advice given him by the sales promotion manager of one of the country's largest newspapers when Mr. O'Donnell was about to enter the advertising field.

Mr. O'Donnell is easily competent to testify in the matter of used car advertising. His success in turning out this sort of copy for the New York branch of Studebaker has been exceptional. He writes the kind of copy which moves cars and the organization whose automobiles he describes is one of the country's larger used car movers.

And another thing. Half of the budget allowed by the New York Studebaker branch for Mr. O'Donnell's work—goes into display advertising.

This information might cause some dealers to snort, for there are numbers of them who simply can't see display advertising for used car promotion. The great majority even of the large volume merchants—and that



Edward C. O'Donnell, who writes used car ads for the New York Branch of Studebaker, believes in an on-the-spot study of the car to be described and he deals with each car as an "individual proposition"

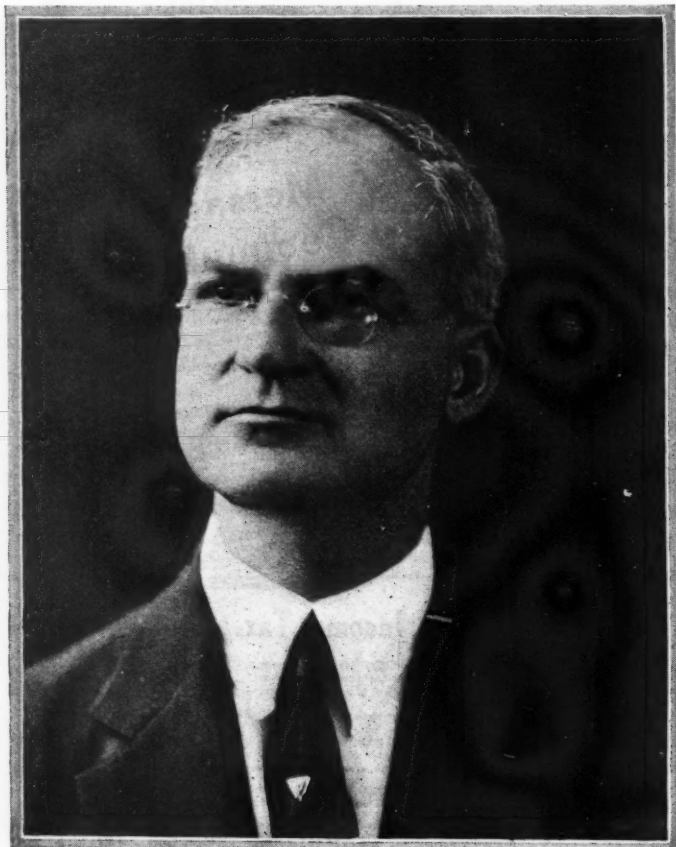
means nearly all of them—concentrate nearly all effort in the classified section. Now and then some are prone to wander out of the classified page for a smash in some other part of the paper with display but after the smash they return to classified advertising exclusively. That is the popular way of using the newspapers for used car leads. Consistent use of display space for used car promotion is a thing which we rarely behold. Studebaker's New York Branch is one of the exceptions to the rule. It has been using display right along in conjunction with insertions in classified sections and these display ads have attracted much favorable notice.

But whether applied in the preparation of copy for a display ad or an insertion in the classified page the two O'Donnell thoughts will hold as excellent fundamentals. In either case the copywriter will make no mistake by "sitting on the running board" to write the ad and then "telling 'em".

By "sitting on the running board," Mr. O'Donnell means, of course, that he never attempts to write a used car description without a particular on-the-spot study of the car he wants to advertise. This painstaking plan is not the one which is always followed. But it is the only way to develop the selling points that count and at the same time run no risk of developing some that can not be backed up when the prospect sees the car.

Not only does it enable the copywriter to pick out and stress effectively the car's more tempting features but

EIGHT YEARS IN BUSINESS



E. H. Bacon, president Bacon Motors Co., who in eight years has built his business from 75 cars a year to more than 100 cars a month.

Below: Show room and offices of Bacon Motors Co., in new building of Spanish architecture. The seasoned timbers which attract the attention of travelers to the districts of old Spain and bring visions of other days are reproduced in the interior of the building. Even the red tile floors are patterned after the hard stone flooring in general use in the old castles of the nobility. At right is Ralph W. Hoyt, secretary and treasurer of the company, who joined the organization a little over a year ago, and who has been an important factor in its growth.

From 75 Cars a Year to More Than 100 Cars a Month in 1925 Is Record of Bacon Motors Co., of Jacksonville, Fla., Which Recently Occupied New \$75,000 Home

THE prevailing style of architecture found in the best homes of the community has been adopted by Bacon Motors Co., of Jacksonville, Fla., for its new home. The result is a business building, in Spanish style, that has charm and distinction but at the same time provides a very practical home for a thriving commercial institution.

The Bacon Motors Co. distributes Hudson and Essex cars in 26 counties of Florida. The company was established in 1917 and the first year sold 75 cars. Sales in 1924 were 670 cars and for the first few months of 1925 average monthly sales were 105 cars.

The company's new building was completed recently at a cost of \$75,000.

The sales and display rooms hold true to the architecture of Old Spain and the exterior is of stucco with window trimmings of mosaic tile and red tile roof.

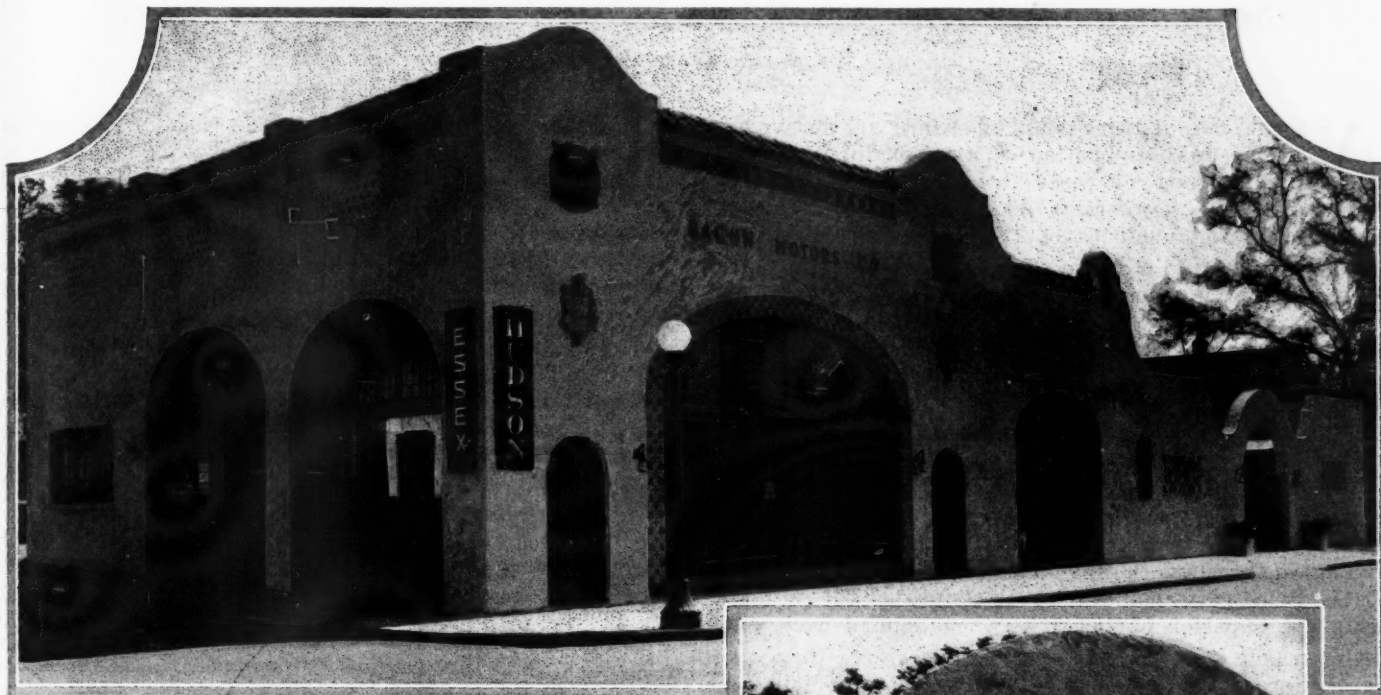
Decorations are in real Spanish polychrome effect.

A sharp change from this old world atmosphere is experienced when the visitor steps from the display rooms to the repair shop to the rear. Here the American spirit of utility predominates and nothing is used that will retard the skilled mechanics in doing expert work and giving speedy service to Hudson and Essex owners.

A feature of the building is that every department is



And Now This New Building



Mosaic tiles in red, blue and bright yellow give a distinct Spanish touch to this unique business building recently erected at Jacksonville, Fla., by the Bacon Motors Co. Below at right is the gateway to the open-air used car department.

located on the ground floor, so arranged as to be easily accessible from two streets. A spacious corner of the building, fronting on Park street, with an entrance also on Dora street, is reserved for sales and show-rooms with offices in the rear.

Adjoining the show-rooms and also fronting on Park street is the parts department, where a stock of approximately \$25,000 will be carried at all times.

Also fronting and opening on Park street is the used car department, with an open court in true Spanish style, and capacity of about 30 cars.

To the rear of the used car department and connected with Dora street by a concrete driveway, is space for washing cars, with equipment for compressed air cleaning.

The service garage, a massive fire-proof building of steel construction, directly behind the show-rooms, is easily accessible from Park, Dora or Oak street. It is equipped with the most modern facilities for automobile repair work. The building has a capacity of approximately 50 cars. Lockers, showers, instantaneous hot water, electric lights, and other conveniences are furnished for the workmen and every detail for their welfare has been given attention.

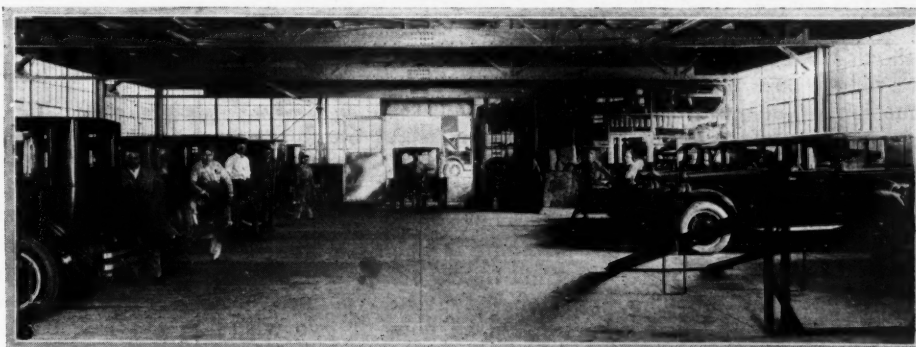
An overhead carriage connected directly with the parts department, eliminates unnecessary steps and consequent loss of time by the workmen. A tube system, connecting with the offices, eliminates the handling of cash in the service garage, and the necessity for daily reports.

E. H. Bacon, president of the company is one of the best known



automobile men in the state. Service to Hudson and Essex car owners and a willingness to share the troubles of his dealers and tide them over business adversities has given strength and loyalty to the company in every Florida city in which it does business.

Ralph W. Hoyt is secretary and treasurer.



Service department of Bacon Motors Co.

Applying a Pyroxylin Finish to a Car

Spraying on the Enamel—Number of Coats Varies—Two Tone Effects

By B. M. IKERT

AS a rule two or three coats of enamel are sprayed on in the final application of a pyroxylin finish. In the majority of cases three coats are used and even more where necessary, depending on the covering power or hiding qualities of the particular color used.

When it comes to a choice of color some discretion must be used as some colors are more stable than others and it is better to tell the customer these facts before the colors are applied. Some of the manufacturers of pyroxylin finishes advise against certain colors such as the maroons and blues which they claim have a tendency to "chalk." Some of the shades have this characteristic more than others.

There is also some difference of opinion as to the undercoats to be used with a lacquer finish. There are those manufacturers who prefer a complete nitro-cellulose finish and again there are those who strongly advocate oil undercoats. Some paint manufacturers claim that the oil undercoats are superior particularly when applied over steel.

One maker states it has been his experience that when pyroxylin lacquer is applied directly to steel it has a tendency to cause rust and that the pyroxylin lacquer may actually be classed as a rust accelerator. Such a condition however needs no serious attention in connection with aluminum bodies.

It is well to bear in mind that there is still much experimental work going on with pyroxylin finishes for motor cars and new discoveries are made almost daily which result in a better understanding of the materials and their application to motor cars. The majority of manufacturers are turning out good finishing materials, but it is necessary to abide by the specific directions accompanying any particular make of materials.

Application of Lacquer Coats Important

Some of the instructions which were given for the application of the priming and under coats apply equally well to the enamel or lacquer coats. It is during the application of the lacquer coats that the operator exerts the greatest influence as to the final appearance of the car. For that reason there must be every assurance that the spray gun is clean and that the air pressure is correct. The same things which were mentioned in last week's article on applying the under coats, applies to the lacquer coats so far as the equipment is concerned.

As a rule the spray gun should be held a little closer for the lacquer than for the paint materials in order that the enamel may be applied properly and the operator should use long swinging strokes over the entire width or length of a panel rather than spraying with a circular motion. The gun also should be held the same distance from the surface at all times in order to get the lacquer uniformly applied.

A good plan for one who has never used a spray gun or lacquer materials is to practice on a large metal panel that is off a car before any attempt is made to spray a body as lacquer is quite different in its application than paint or varnish. The operator may read volumes on how to spray a body but very often an hour or two with the gun will teach him exactly the things to watch out for in doing the work.

The stream from a spray gun is usually thinner on the edges than in the center and for this reason it is customary to overlap the spray about one-half the width of the stream. Some operators cross-spray the coats, that is, they apply one coat horizontally and the next coat vertically, a procedure which is said to give very excellent results when done by a competent operator.

All lacquers must be thinned before they can be sprayed and it is customary to use one part of lacquer to one of solvent. This is especially the case with the first coat of lacquer. With some of the pyroxylin materials the second and third coat are reduced by using two parts of the enamel to three of the thinner or reducer.

After the first coat of enamel has been applied it should be left to dry for one hour after which the second and third coat can be applied. The first coat is dried at a temperature of 60 degrees Fahrenheit and the third coat should not be applied until the second coat has air dried for at least 15 minutes at 60 degrees Fahrenheit.

May Be Safely Varnished

One of the makers of pyroxylin materials furnishes three types of clear nitro-cellulose lacquer consisting of (1) a clear lacquer for mixing with the last one or two coats of color enamel, when it is to be left as sprayed or coated with finishing varnish to obtain an especially deep luster, (2) clear lacquer for mixing with the last one or two colors of color enamel when it is desired to have an especially hard final coat which may be rapidly polished to a high gloss, (3) clear lacquer for use on natural wood wheels, mouldings, steering wheels, instrument boards, etc.

The particular lacquers above mentioned both clear and colored are unique amongst nitro-cellulose materials from the fact that they may safely be varnished. Because of their ingredients most pyroxylin lacquers will not hold varnish. This is also true because of their low degree of elasticity. Since nitro-cellulose under coats lack the so-called "suction" of the old type undercoats, they make

WITH the advent of pyroxylin finishes there is a feeling among some of the smaller establishments that they are going to be forced out of business sooner or later because motor car factories rapidly are adopting lacquer finishes, said to last practically as long as the car itself.

There is no cause for alarm so far as this publication can ascertain because cars will have to be refinished sooner or later regardless of the fact that the factory may have put on lacquer coats. When the owner of a lacquer-finished car turns in such a car after several years use there is just as much chance that the buyer of the car will want a refinished job as was the former case with varnish finishes.

The new purchaser also may want a change of color, and one of the distinct advantages of the lacquer system is that the new coats can be applied directly over the old lacquer. That is, the car will not have to be stripped to the bare metal.

an ideal surface for finishing varnishes, materially increasing the life of these materials. Many car owners demand a high lustre procurable only with finishing varnish and it is advantageous therefore to be able to apply varnish over pyroxylin enamels in such cases.

Where the final finish is to be polished lacquer a special lacquer for polishing is mixed with the final coat. The finished body should be allowed to dry over night at room temperature so that the final coat is sufficiently hard to attain a high lustre when polished. The harder the final coat is allowed to get the simpler it will be to attain a good polish. Also if the gunglaze and surface coats are as smooth as possible the more perfect will be the enamel surface and the better the final polish.

It is considered good practice to rub with pumice stone and water or with water proof sandpaper before the last coat is applied to even up the surface. Where the highest type of finish is desired, this should be done.

It is generally the best plan to apply lacquer to such parts as the cowl and rear deck, gasoline tank, etc., after the sides have been done. This is to avoid spray dust. Whenever the sides and top are being coated it is quite difficult to prevent some of the spray from settling over the cowl in the form of dust, consequently if these parts are left until last the final lacquer usually will dissolve the spray dust into the film. As previously mentioned should the job when finished have any traces of spray dust a coat of the reducer or thinner will generally dissolve it. It is customary to apply this last coat using about five parts of the thinner to one of the color.

Cover Windows and Doors

In order to get a two tone effect on closed cars the windows and doors must be covered with paper to prevent the finishing material from settling on the glass. All the coats after the surfacing coats should be applied on the lower panels first being particularly careful to get as little as possible of the over-spray above or on the moulding. When the last coat has dried at least an hour or longer a strip of paper should be pasted against the lower edge of the moulding, using tape or ordinary library paste. This will prevent the over-spray from settling on the lower panel. Then when the ground colors and enamel have been applied to the lower panels the paper is removed by soaking with water and a sponge. If adhesive tape is used gasoline can be used to remove all traces of it.

One company is now experimenting with a liquid to be used for masking or screening various parts of the body which are to be protected from the spraying. It is the intention that this liquid be non-soluble in nitro-cellulose solvent but soluble in water. The liquid will be brushed over surface to be protected so that none of the lacquer deposited on it will go through to the body panel and when the spraying process is finished the masking liquid can readily be washed off with water, taking what lacquer has adhered to it with it.

Every now and then it happens that one or more of the body panels becomes damaged after a car has been finished with lacquer and the job is then one of touching up these spots. It is difficult to give specific directions for this because each job is a case unto itself and very often it will be found more advantageous to refinish a complete panel rather than attempt to remedy a particular spot in such a panel. In repairing bad scratches and where the machine has been scraped off to the bare metal the spot has to be built up in practically the same manner as though the entire panel were being finished.

One of the makers of pyroxylin materials states that in repairing a damaged portion of a panel it is wise to

PAASCHE AIR BRUSH CO.

1909-1923 Diversey Parkway

Chicago, U. S. A., July 3, 1925.

Mr. B. M. Ikert,
Technical Editor,
Motor Age,
Mallers Bldg.,
Chicago, Ill.

Dear Sir:

I have just had brought to my attention your article on nitro-cellulose finishing which appears in the July 2nd issue of Motor Age.

I wish to compliment you on the clear and concise manner in which you entered into the discussion of this comprehensive subject. I enjoyed reading it very much. It seemed to me that it would prove rather difficult to you to find the line of demarcation between the necessary and unnecessary facts which enter into an intelligent treatise on automobile painting. However, this is not evidenced in your opening number.

I feel that you have entered upon this discussion from the most advantageous point, namely; the beginning. This is a thing that most writers on this subject fail to see or take into consideration.

The fact that all material must be in such a form as to be readily grasped by the mind of a layman, makes your task doubly difficult. You deserve commendation for the manner in which you have handled the subject without becoming technical.

I would greatly appreciate it if you will see that a copy of each article is addressed to me personally as I am interested in reading and filing your whole series for reference.

Assuring you of our desire to cooperate with you at all times, we remain

Yours very truly,

PAASCHE AIR BRUSH COMPANY

(Signed) C. E. Valentine, Jr.

block off the damaged panels from the rest of the body by pasting at least 6-inch strips of heavy wrapping paper around the entire panel. This prevents the dried spray dust from settling on the undamaged portion. Also when the finish is not off all the way to the metal it may be possible to repair the damaged spot without using all the coats needed for the entire finish. Thus if the primer is still in place and the damaged portion is not too large it may be possible to repair by putting up the scratch, sanding this down after drying and then following by a coat of ground color and two or three of the proper enamel. Sometimes it is necessary to use a surfacer first followed by the other coats.

When it becomes necessary to repair small scratches through the enamel only some operators make a mask by cutting a hole in a piece of heavy paper so that the hole will be just a little larger than the scratch to be repaired. This mask is held tightly against the damaged spot and one or more coats of enamel applied as necessary to bring up the finish flush with the surrounding surfaces. When spraying the material during such repairs it is often found advantageous to adjust the spray gun for a round spray. With such a spray it is easier to do the repairing as it is possible to blend the material better.

Next week's article will take up a discussion of polishing operations, stripping and so forth.

Yellow Cab Joins General Motors in \$36,000,000 Merger

*New Corporation Will Have Full Line of Buses, Trucks, Taxicabs and "Driv-
urself" Passenger Cars. No Public Financing Involved and Policies
of Y. C. Line Will Remain Unchanged*

ONE of the largest consolidations in the history of the automotive industry and probably the greatest in recent years was effected in Chicago last week when the General Motors acquired a \$16,000,000 interest in the Yellow Cab Manufacturing Company. This provides General Motors with a full line in the revenue-producing vehicle division.

The truck division of General Motors is to merge with the Yellow Manufacturing Company, the new concern to be called the Yellow Truck & Coach Manufacturing Company. To this corporation, General Motors will transfer all real estate, buildings, plants machinery, materials, products, assets and trade marks belonging to its truck division, including licenses for patents and the good will. The aggregate value of the property to be transferred, exclusive of good will is \$10,811,310. General Motors also will pay \$5,188,690 in cash, making a total of \$16,000,000.

The authorized capitalization of Yellow Truck will be \$36,000,000 consisting of 200,000 shares of 7 per cent cumulative preferred stock of \$100 par value, callable at \$120; 600,000 shares of class B stock of \$10 par; and 1,000,000 shares of common stock at \$10 par. The B stock is to be distributed to present holders of B stock on a share for share basis. Present stockholders also will receive a 25 per cent stock dividend in the new cumulative preferred. All the \$675,000 of class A preferred of the Yellow Manufacturing Company, held by the Chicago Yellow Cab Company, an operating concern, will be retired at par.

G. M. Gets 800,000

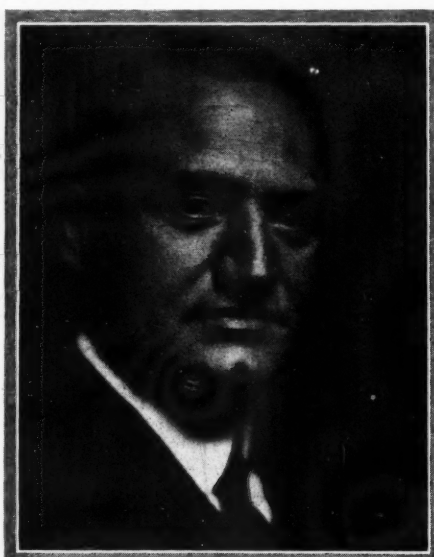
General Motors will obtain 800,000 shares of the common stock in payment for its \$16,000,000. The common stock and the class B stock will have the same voting power a share. After cumulative dividends have been paid on the preferred stock, class B and common stock will share alike in remaining dividends to be distributed. However, for a period of three years, should dividends declared and paid be less than 75 cents a share on the aggregate of 1,400,000 shares of class B and common outstanding, then the class B shall have preferential cumulative rights on dividends up to 75 cents a share.

Following the three years, should the class B stock have had these preferential rights, the common stock will then be given the same right for the next three years. These provisions guarantee present holders of the class B stock receipt of the current annual dividend for the

next three years, and at the same time give promise of the possibility of larger distributions.

There is no public financing involved in the entire transaction.

Heads Consolidation



John A. Ritchie, formerly president of the Yellow Coach Manufacturing Company, who is made president of newly formed Yellow Truck & Coach Manufacturing Company

Active management of the new concern will be for the most part in the hands of the present officials of the Yellow Cab Manufacturing Company. Yellow Manufacturing will be represented by thirteen seats on the board of the new corporation, with General Motors getting the remaining eight seats.

The board of the new company will consist of the following:

John D. Hertz, chairman; Irving B. Babcock, Donaldson Brown, Edward N. D'Ancona, P. L. Emmerson, Harold E. Foreman, John L. Pratt, Leonard S. Florsheim, F. J. Fisher, Paul H. Geysler, George A. Green, Pierre du Pont, Robert Lehmann, Charles A. McCulloch, Otto W. Lehmann, John J. Raskob, John A. Ritchie, A. P. Sloan, Jr., Otto E. Stoll, A. H. Swayne, John R. Thompson and William Wrigley, Jr.

The officers of the new corporation will be:

John A. Ritchie, president; John D. Hertz, chairman of the board; Paul H. Geysler, vice president in charge of pro-

duction; George A. Green, vice president in charge of engineering; Irving B. Babcock, vice president in charge of accounting and finance; P. L. Emmerson, vice president in charge of sales; Otto E. Stoll, vice president and manager of the truck division.

In announcing the merger, Mr. Hertz said:

"This will enable us to carry out a rather extensive plan we have had in mind for some time, to become the largest manufacturer of commercially operated revenue-producing vehicles in the world.

"We have established a reputation through many years of manufacturing as the producers of the highest class and biggest revenue-producing taxicabs, coaches, and light delivery wagons in the world. We have never built to a price, but always to an ideal, with the result that we build the most efficient, reliable and dependable product in the industry. This, at present comprehends a line of seven types of motor coaches, two types of taxicabs and two types of 'drivurself' cars and several types of one-ton wagons. Through this purchase, we will now add to our present list a complete line of trucks varying from one to seven tons.

"This does not mean any radical departures or drastic revisions in our business as would seem at first glance, as our motor coaches are really six-ton carrying vehicles.

Logical Combination

"Many advantages will naturally accrue to the company by becoming affiliated with the General Motors Corporation. In many respects this is the most logical combination of interests, and under the new order of things will not only give us the manufacture of a line of commercial vehicles more comprehensive than any other manufacturer, but will enable us to incorporate in the design and construction of our trucks many of the operating and manufacturing refinements to be found in the construction and design of our motor coaches and taxicabs.

"Incidentally, I might say that the General Motors Corporation truck division is a profitable organization. It has an experience in the manufacture of heavy duty vehicles extending over many years, and has in service today many of the heavy duty trucks doing satisfactory duty all over the world.

"The well known policies of the Yellow Cab Manufacturing Company will remain unchanged.

"The personnel and management of the company will remain the same, excepting

for some minor changes in positions which will naturally result from a merger such as this. The operation and manufacturing organization of the General Motors Corporation truck division will remain practically in its entirety. This will be headed by Otto E. Stoll, who will become vice president and a director of the new company. He will be manager of the Pontiac truck plant and the Detroit engine plant.

"John A. Ritchie becomes president of the new company. His experience as a bus operator and manufacturer began in 1918 with the Fifth Avenue Coach Company. His experience has been further widened since his connection as president of the Yellow Coach Manufacturing Company. He will have under him all the men that have made our company a success. This will not be a one or two man organization. Everybody on the staff is an individualist and a builder. We believe we have the best producing and service organization in America.

Cab Company Unchanged

"Mr. Ritchie will also remain as head of the coach operating company. Neither this company nor the Yellow Cab Company of Chicago (which is an operating company) is to be affected by the merger.

"We feel that our industry is on the brink of a tremendous evolution. Throughout the nation, all thinking transportation men appreciate that the motor coach and motor truck are destined to fill an increasingly important niche in the general scheme of things. For some time we have been preparing for this eventuality.

For instance, I believe that the time is near at hand when a passenger will buy a railroad ticket calling for transportation for himself and baggage from his home to the place at which he intends to stop in some distant city. In other words, the purchase of his original railroad ticket will include such transportation as taxicabs and coaches.

"This is equally true in the transportation of freight. In the near future, I believe we will see the railroad shippers' bill of lading include pickup service and delivery as well as transportation from one place to another. In other words, railroad companies must necessarily avail themselves of the use of such vehicles as ours in order to carry out a complete plan of transportation.

"As far as the financial end of the purchase is concerned, the figures speak for themselves. Our contact with the organization of the General Motors Corporation has convinced all of us that the Yellow Truck & Coach Manufacturing Company, as the new company will be known, is going to derive untold benefits in many ways. This holds particularly true of the assistance we will receive through the tremendous world-wide selling organizations, research departments, and the general advice and assistance received from a strong organization of officers, manufacturers and financiers.

"This deal brings to Chicago not only the coach, taxicabs and 'drivurself' indus-

tries, but now adds to it the heavy-duty truck business."

Sloan Makes Statement

Alfred P. Sloan, Jr., president of the General Motors Corporation said:

"The Yellow Cab Manufacturing Company, apart from its position in the taxicab business, occupies a strong position in the bus field. A merger of the General Motors truck business with the business of that company is calculated to result in material economies in the manufacturing and distribution ends of both of these important lines of business.

"General Motors Corporation has recognized the importance of the bus, and believes that the proposed merger with the Yellow Cab Manufacturing Company will immediately place it in a strong position in the bus business, with the opportunity of enjoying a really unique position in the future development in that field. It also believes that its position in the heavy-duty truck business will be greatly strengthened as a consequence of the combined management and the benefit derived from more economical manufacture and distribution."

G. M. President



Alfred P. Sloan, Jr., president of General Motors Corporation

Business Structure of Yellow Cab

THE business structure of the Yellow interests as it is about to pass into the control of the new organization is built upon the following lines:

The Yellow Cab Manufacturing Company is the parent organization. Subsidiaries have been organized to control the sales, finance and manufacturing divisions of its operations. Officers of the parent company and of many of its subsidiaries are interlocking. Of the manufacturing companies the largest is the Yellow Coach Manufacturing Company, of Chicago, whose officers are:

President, John A. Ritchie; vice-president, C. A. Green; secretary and treasurer, Irving B. Babcock.

Officers of the Yellow Cab Manufacturing Company are:

President, John Hertz; vice-president, Irving B. Babcock; general manager,

(Continued on Page 35)

Began as Newsboy



John D. Hertz

Born in Chicago 45 years ago, John D. Hertz, president of the Yellow Cab Manufacturing Company and executive head of the majority of its many subsidiaries, started his business career as a newsboy. A few years later he drove a delivery wagon and later still became a newspaper reporter. He rose in the newspaper profession until in 1907 he was assistant sporting editor of one of the Chicago dailies.

It was at this time that he met Walden W. Shaw and became interested in automobile selling.

One day he noticed a number of idle used automobiles in the showroom and conceived the idea that it would be profitable to rent the cars for livery purposes. He found, however, that the cars were too large and expensive to operate; that the wear and tear ate up all his profit.

He then delved through a number of catalogs listing prices of automobile parts and figuring up the aggregate cost of a completed automobile from these catalogs, decided it would be cheaper to build his own automobiles to specification than to purchase the product of some other manufacturer for use in his livery trade.

He planned his cars to be small and easily operated as well as strong and economical. He began painting the cabs yellow to attract attention and the business immediately began to grow.

The Yellow Cab Company was organized in Chicago in 1915. From this grew the huge business which was headed by the Yellow Cab Manufacturing Company before the merger with General Motors.

Expect Exchange to Down Deadbeat

ELIINATION of bad credits caused by the practice of the habitual "deadbeat" in buying from one source, without paying, as long as possible, and then doing the same thing somewhere else, is expected to be accomplished by the credit exchange organized by the Tire and Accessory Dealers Association of Louisville, Ky.

Members of the Association found that they were losing thousands of dollars annually through such bad credits, according to William Mohlenkamp, president.

"For a long time," he said, "credit has been allowed persons who proved to be bad risks, but until recently we have had no means of ascertaining the credit rating of the many who buy in the neighborhood of \$100 worth of tires and accessories at a time.

"Consequently, the regular deadbeat has made a practice of buying from one seller as long as credit was extended, and then buying from another for the same length of time, until he had accounts all over the city.

"We have been to blame, to some extent, for this situation. Keen competition sometimes encourages charge sales that ordinarily would not stand close scrutiny.

"While our association is just beginning to function, beneficial results have already been obtained and we expect to pare needless credit losses to a bare minimum by not permitting the professional deadbeat to deceive more than one association member.

"To our credit bureau at association headquarters each member will report promptly any and all names to be added to the credit list. A phone call will enable any member to ascertain the credit standing of each prospective customer."

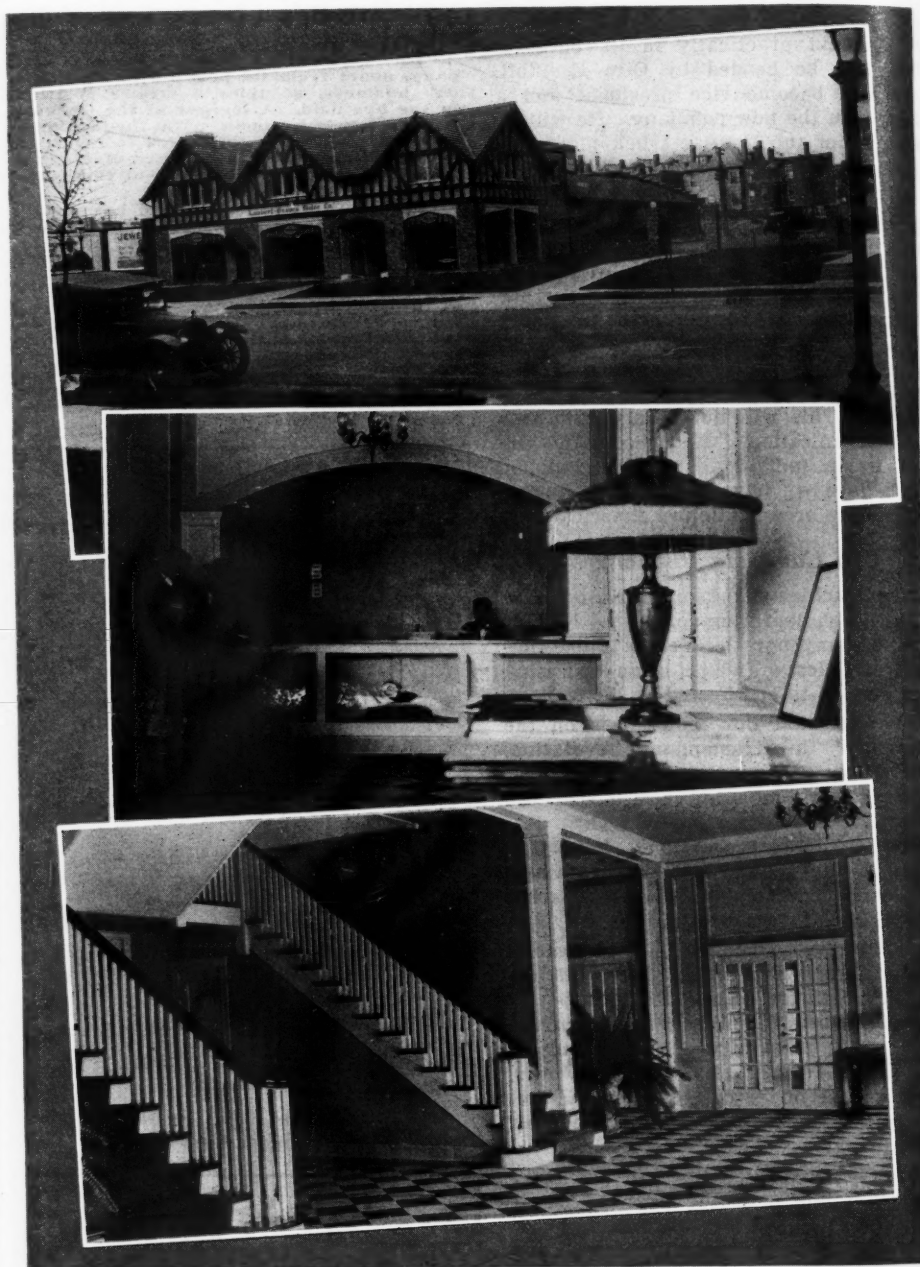
COMPRESSED AIR WASHING DEVICE

A compressed air car washing device installed by the Kendall filling station in Hartford, Conn., on a very busy corner has been favored with liberal custom since the opening recently. A steel building in harmony with the filling station was erected and made large enough to accommodate two cars. The washing device is a stock affair purchased from a local wholesale house and is reported to be working very satisfactorily. This station is the forerunner of many more that will be opened in this city. The business man who does not use his car during the day finds the service offered by Kendall of much benefit.

CUSTOMERS LIKE SERVICE

Regular greasing and a free inspection for every thousand miles the car is run make a strong appeal to Cadillac owners

Old English Tavern



Here are views of the new building of the Lambert-Graves Motor Company, of St. Louis, which recently was erected at 4035 Lindell boulevard at a cost in excess of \$100,000.

(Top) An outside view. (Center) Corner of showroom, with information desk which incorporates accessory display cases. (Bottom) Stairway to second floor.

in New Orleans and are largely responsible for the growing patronage of the Gus D. Revol Cadillac workshops, according to the management of this company.

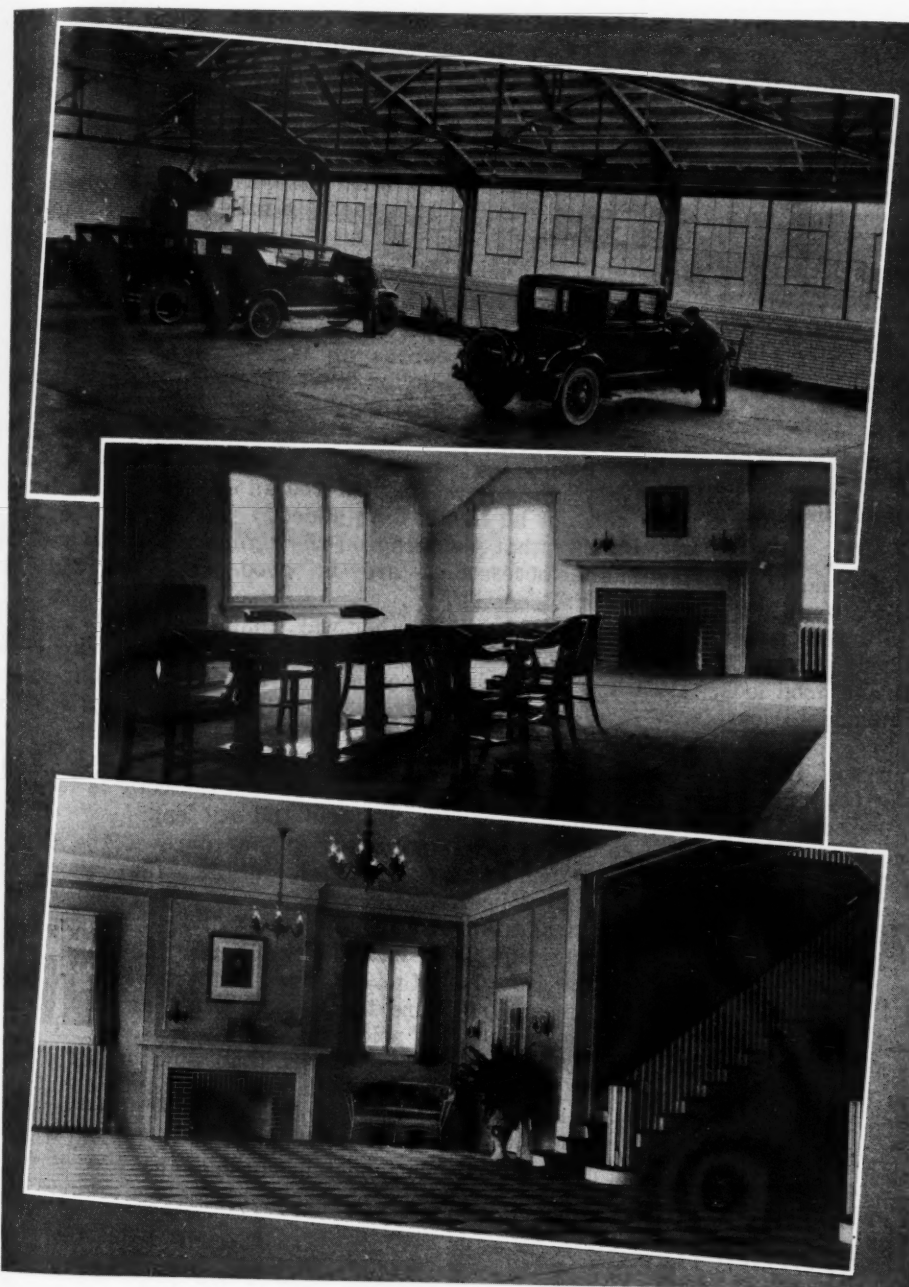
"Automobile troubles are diagnosed before the owner leaves the shop," the manager of the Revol company said. "The prices on labor and material are also made to insure the customer's satisfaction. We have a full equipment of men, tools and machinery for special work so that the time taken in handling

the automobile may be considerably shortened. This is a feature that appeals to our public.

"Engine and chassis are steam cleaned without charge when work is approximated at \$15 and \$20. The garage floor is scrubbed with live steam weekly. Our customers appreciate these services.

"We are an authorized Dupont Duco refinishing station where beautiful Duco two-tone jobs are turned out in short order."

Idea in Dealer Home



(Top) The workshop. It is as attractive as any part of the building. It is truly a "sunlit" room as may be seen by the amount of glass in the side walls. (Center) Second floor above show room used by salesmen and for conferences. Picture does not show full charm of room. (Bottom) Section of show room revealing fireplace and homelike appointments.

DISTINCTIVE PUBLICITY

How is this for good used car publicity? The Drennen Motor Car Company, Birmingham, Ala., ran an advertisement in which all of the salesmen in their used car department appeared, that is their photographs appeared. By mistake three of the men were left out of the copy. The next Sunday the pictures of the three salesmen appeared in the automotive section with the statement.

"Last Sunday Drennen Motor Car Company ran pictures of the men who sell used cars for them, but these three were omitted because they were too busy selling used cars to pose for the photographer. They were responsible in large part for 126 people in and around Birmingham buying used cars the 'Drennen Way,' during April."

There was more used car copy but the above was the distinctive part.

He Sells Them on Way to School

DRIVING a Fordson tractor 700 miles in seven days and calling on 32 dealers while on the trip is a mild week's work according to E. F. Case of Wagoner, Okla., who attended the national school for Fordson salesmen at Houston, Wis. Mr. Case was one of the students at the school and he decided since he was going to a Fordson school he might as well go in approved style. So he crawled on the seat of his Fordson at the station in Wagoner, Oklahoma, and "hit the trail" for Houston.

Mr. Case is also representative of the manufacturers of Kingham trailers for Fordsons. He decided to "kill two birds with one stone" in calling on the "trade" between Wagoner and Houston. He called on 32 dealers during the seven days and sold a good many of them. On the seventh day out he piloted his Fordson into Houston and entered the school. He was graduated with "honors" at the end of the two weeks term.

When he finished the course at Houston he straddled the seat of his Fordson and left for Wagoner, Okla., his home town. He said he expected to run into the Wagoner service station in six or seven days, depending upon the number of dealers he called on enroute.

"Traveling on a Fordson is great sport," he said, "and you are in a better position to talk tractors and trailers to a dealer when you drive up to his place on both of them."

FEATURE RACE TIRE IN SHOW WINDOW

H. C. Graham Co. of Milwaukee, dealers in Firestone and Oldfield tires attracted many spectators to the company show windows at 138 Oneida Street, with an exhibition of one of the balloon tires that "got in the money" in the 500-mile race at Indianapolis on Memorial Day. Promotional matter liberally sprinkled about the window made the assertion that this race finally established the balloon tire as practical for all purposes, and free from the many objections hitherto made against it.

NEW FORD REPAIR BOOK

The 1925 revised and enlarged edition of "The Model T Ford Car," by Victor W. Page, has been published by the Norman W. Henley Publishing Co., 2 West 45th street, New York City, at \$2 a copy. This is a book of 455 pages devoted entirely to the operating principles of all parts of the Ford automobile, with instructions for driving, maintenance and repairing; also complete instructions on the Fordson tractor.

Write It While Sitting on the Running Board

(Continued from page 11)

must, before all others, bring himself into the ecstasies of sheer adoration. He must have honest enthusiasm over the used car, tempered with and controlled by a well cultivated sense of discrimination and good judgment.

Enthusiasm is necessary because enthusiasm is necessary to the business of selling any product, while it requires good judgment to keep enthusiasm from overdoing matters.

The copywriter must sell himself on the conviction that the used car is *good* merchandise. That should not be difficult. He offers more miles of transportation on the basis of price asked than is offered in a new car. There should be no hard work stirring up enthusiasm over such merchandise as that.

Illustrating the liability of running into undesirable consequences through the practice of long-distance copywriting is an experience related by a dealer who since has made the "running board" idea an iron rule of his house.

Where a Sale Was Lost

In a list of cars advertised for sale a Buick model was mentioned which, according to the copy, had "four practically new tires," a spare tire and certain accessories. A prospect came into the used car department apparently much interested in the Buick. He gave it one good look, his face took on a grim aspect and he turned to leave without explanation. Plainly he was mad.

The salesman was puzzled, for the car was in good condition, the price was fair and he really thought that it offered an unusual value for the money asked.

"Would you mind giving me your objections to that car?" the salesman questioned as the prospect was about to go out the door.

"No, I don't mind a bit, as you insist," the man replied. "That car simply does not have a thing on it that you say it has in your ad."

Out he went.

Investigation by the proprietor developed that the man was absolutely correct with respect to the accessories and the condition of the tires as described in the advertisement.

To his chagrin he discovered that there was no spare tire at all on the Buick advertised and that the four on

the car were not in the best condition. The young man charged with the responsibility of writing used car ads was called into conference and he offered this awkward, limping apology.

"Well, I got that dope from one of the boys in the shop who had been working on the car."

And the mechanic to whom he referred admitted later that he had the Buick in question mixed up with another car.

Each Car an Individual Case

Long-distance methods are positively hazardous in the work of used car advertising. It requires more trouble to deal with each car as an individual proposition, on the O'Donnell plan, but for immediate purposes and in the long run this additional trouble pays.

A speaker who remarked during the Chicago show that "some people buy the used car for the car and others buy it for the accessories" offered an excellent advertising thought, but he should have added:

"Be sure that you hang on the right accessories and be sure the accessories are in good condition and as described."

Be sure, to put it another way, that the veracity of the advertisement in all particulars cannot be challenged. Truth in advertising not only is a fine virtue but it is *business*. It is much better, quoting a prominent advertising expert "to understate than overstate."

Let the used car shopper have the real picture. The chief objective of the man who writes the copy is to help the shopper visualize. Tell 'em and sell 'em.

The shopper is much more likely to covet the thing which he can picture in his mind than that which is but vaguely conceived.

Cars of all kinds are listed in the daily newspapers and without descriptive assistance even though the make, year and price are given the car advertised for sale in this fashion means no more to the prospect than any other car in the paper in his price class.

Often it will mean less to him than numbers of other cars advertised in the same page because the other ads more readily help him "see" those cars.

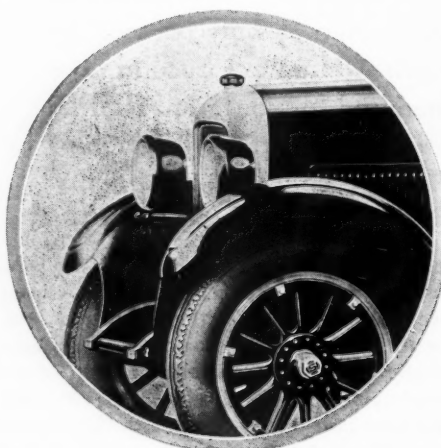
"Sit on the running board," get the facts, get them straight—then tell 'em, and tell 'em enough.

New Radiator Shell on Studebaker Standard Six Models

ALL Studebaker models on the Standard Six chassis are now being equipped with a radiator shell of changed appearance. Earlier models of the Standard Six carried a shell whose upper part while of convex shape had a somewhat flat appearance. The new shell which is interchangeable with those of the former style, has a perfectly rounded contour and is very similar to the Big Six design except that it is smaller and the fluting or scroll work eliminated. A slight change has also been made in the shape of the side rear quarter windows on the duplex phaetons.

N. A. C. C. FIGURES DELAYED

DETROIT, July 11.—The usual monthly estimate of domestic car and truck production by the National Automobile



Front end of the Studebaker Six, showing the new design of radiator shell

Chamber of Commerce is delayed because of the fact that the board of directors meeting, for which the figures are prepared, will not be held until late in the month. Unofficial estimates, however, bear out the prediction made a week ago that the June figure will not be far below the 400,000 mark. It will probably be between 366,000 and 399,000, as compared with 404,300 in May and 421,878 in April of this year, and 249,868 in June, 1924.

PEERLESS ORGANIZATION

CLEVELAND, July 11.—The Peerless Motor Car Company has appointed the Oldsmobile Motor Company of Seattle, Wash., Peerless dealers to succeed the Peerless Pacific Company, it was announced here today. J. F. & M. M. Stein have been appointed Peerless distributor as Asbury Park, N. J. Contracts of Matern Motors, Inc., of Flushing, L. I., N. Y., and of the Jefferson Motors, Inc., of Perth Amboy, N. Y., have been cancelled.

Some Letters to the Editor

A Mechanic's Side of the Story

Dalton, Mo.

To the Editor of MOTOR AGE:

What I want to tell you people is that I'm a reader of several magazines, but I get more good from reading your paper. I'm a careful reader of your editorials and of such items as Packer and Tom put out. One piece of A. B. C. Hardy, of Olds Motor Works, in your December 25 issue of MOTOR AGE impressed me a great deal. He says that after so many makes have fallen out, that there will be probably 60 to sell in the year of 1925. And with all he says who knows the automotive business better than these men that have put their all into it.

Then I say who knows the clearance dimensions of pistons, shape and construction of motors in these 60 makes of cars better than the alert mechanic. Of course we all know a mechanic is looked upon as a greaser. People won't shake hands with him because they would have to wash immediately after the operation. Most of them know nothing else but to use the hammer and cold chisel. But you find one now and then who is trying to get ahead. Trying to learn more about motors, construction of springs, frames, brakes and controls. There are some who are better read on 20 makes of cars than some salesman is on the car he sells. Why? Because he has never gotten his hands or clothes dirty finding out.

A mechanic knows how a piston of a certain car looks after running 45,000 miles, and he finds pistons in other cars that have only run one-half that distance which are worn worse than the 45,000 mile car, and we say why? No one knows better than the good mechanic. I mean the mechanic who watches and learns.

We see cars come in with a broken axle shaft. The owner says, why don't they put a larger axle in these cars and then I would have a real car. I tell him, no, Mr. Owner if they would put a stronger axle in this particular car of yours they would have to put a better gear into the differential, and if they did that, Oh, My, that clutch, and so on until you reached the front springs.

He says then how can they build a real car? I tell him we have them, good ones made by real manufacturers, which are built so near perfect that they remind me of the old story of the One Horse Shay which ran 100 years to the day and then what happened—the same thing that happens to our buggies today, go to pieces.

My point is this to you dealers, there is coming a time not far distant that before a man is going to purchase a car he is going to know the mechanic that is to do the (manicuring) for him, or the giving her "the once over" that the car needs now and then. I believe the greatest salesman of the future will be the A-1 mechanic. And what are the dealers doing to better the mechanic? Why can't we have conventions for mechanics where we can learn, get acquainted.

But Mr. Dealer, a specification sheet on a car, or a shop note, a blue print of a new carburetor, or a description, of some new device used on cars, will sure help the mechanic. If a mechanic knows he can push the sale of accessories for cars while they are being worked on. I know I do for my firm, the Triangle Motor & Supply Co. of Dalton, Mo., and they appreciate it,—I can tell that by the check at the end of pay day.

You may ask me what a good mechanic means. It means a man of a good education, lots of horse sense, not afraid of work and who knows a car from one end to the other, who can repair it from one end to the other, who can operate any kind of shop equipment, who can do a job in a minimum

length of time, and a man who can weld, run a lathe, build batteries, paint, take care of tools, resharpen, dress and temper. He can also keep up on manufactures, new appliances and improvements in cars. And people, this is not too strong for a mechanic, I wouldn't put so much on them if I didn't know I could fill the place of a good mechanic. And you mechanics can all be what your employer terms a good A-1 mechanic if you will keep your eyes open, read a good motor journal at night instead of going to a movie, pick up a book and read it at noon hour instead of sitting around the stove telling yarns.

A mechanic's side of the story.

"BERT."

Albert M. Alexander.

More About Superchargers

To the Editor of MOTOR AGE:

Chicago

I have read Mr. Ikert's article in a recent issue of MOTOR AGE entitled "All About Superchargers" and would like to call your attention to an error that occurs in the first paragraph of this article. You state—

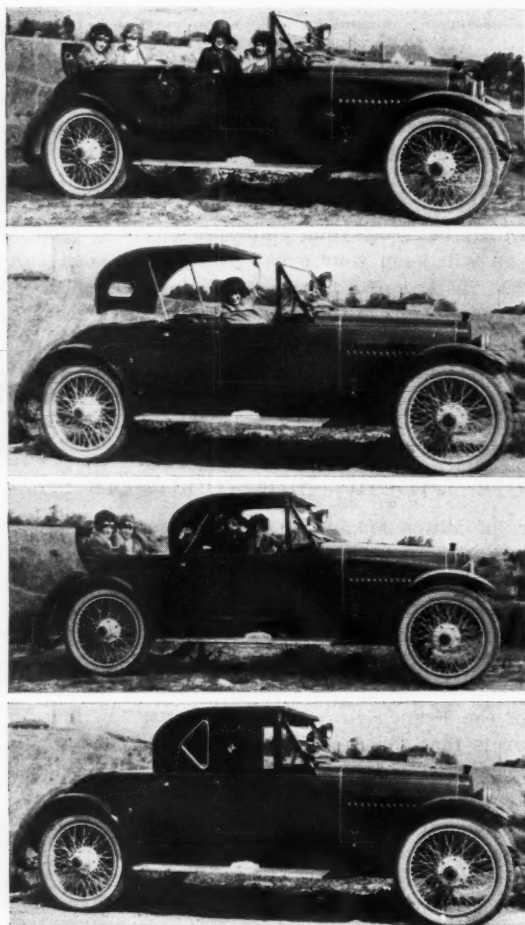
"but the first practical application of it, according to available records, goes back only to 1923 at the running of the French Grand Prix at Tours."

My recollection is that the first use of supercharging in automobile racing occurred in 1908 when the Chadwick Engineering Company of Pottstown, Pa., ran out a six-cylinder engine of the same bore and stroke as the four-cylinder they had previously used with considerable success. Contrary to their expectations the car with the six-cylinder engine was not appreciably faster than the one with the four-cylinder engine with the result that they set out to discover why this was true. Analysis showed that the inlet valves and ports were the determining elements and as there seemed no easy way to get around this condition the thought occurred to them that they might put the charge in under pressure and in that way compensate for the shortcomings of the induction system. Their first effort was a single-stage centrifugal blower, mounted between the carburetor and the manifold and driven at a speed of 6 to 1 by a 3 in. wide belt running from the outside diameter of the flywheel to a pulley on the rotar shaft of the blower. This application worked so well that they continued their experiments and developed three-stage blowers mounted and driven in the same manner as the single stage. Cars so equipped won quite a few races and it was one of these cars which Willie Haupt drove approximately 100 miles per hour more than fifteen years ago. These cars qualified as stock cars inasmuch as a number of them were built and sold to the public.

Several years ago, when I was located in Philadelphia, certain English motoring papers carried the story of the Mercedes cars used in the Targa Floria race in Sicily, and they gave the Mercedes or, as they stated, "our late enemy," credit for having been the first to use supercharging in automobile engines. I questioned this statement and, as a result, was asked to support my contradiction with same evidence of the Chadwick's prior use and was able to get in touch with both Mr. Chadwick and Mr. Nichols, the former Chief Engineer of the Chadwick Engineering Works, also with Mr. Willie Haupt, who assisted in the developing of these cars and drove them, and the information herein given can be supported, if you wish, by dated drawings of the parts used although I think you will find support in the files of MOTOR AGE.

L. W. OLDFIELD.

MOTOR AGE'S PICTURE PAGES



SHIFTABLE TOP FOR ROADSTERS. B. B. Ellerbeck of Salt Lake City has designed a hand operated roadster top to provide for maximum range of vision in heavy traffic. It is carried on a set of arms which swing it down over the rear deck. The weight is counterbalanced by springs fastened to the body sills and connected to offsets on the shaft which joins the top supporting arms. These springs are under tension when the top is down. To allow use of the deck seat when the top is down, a panel in the roof is removable.



WAITING FOR THE NEWCOMER.

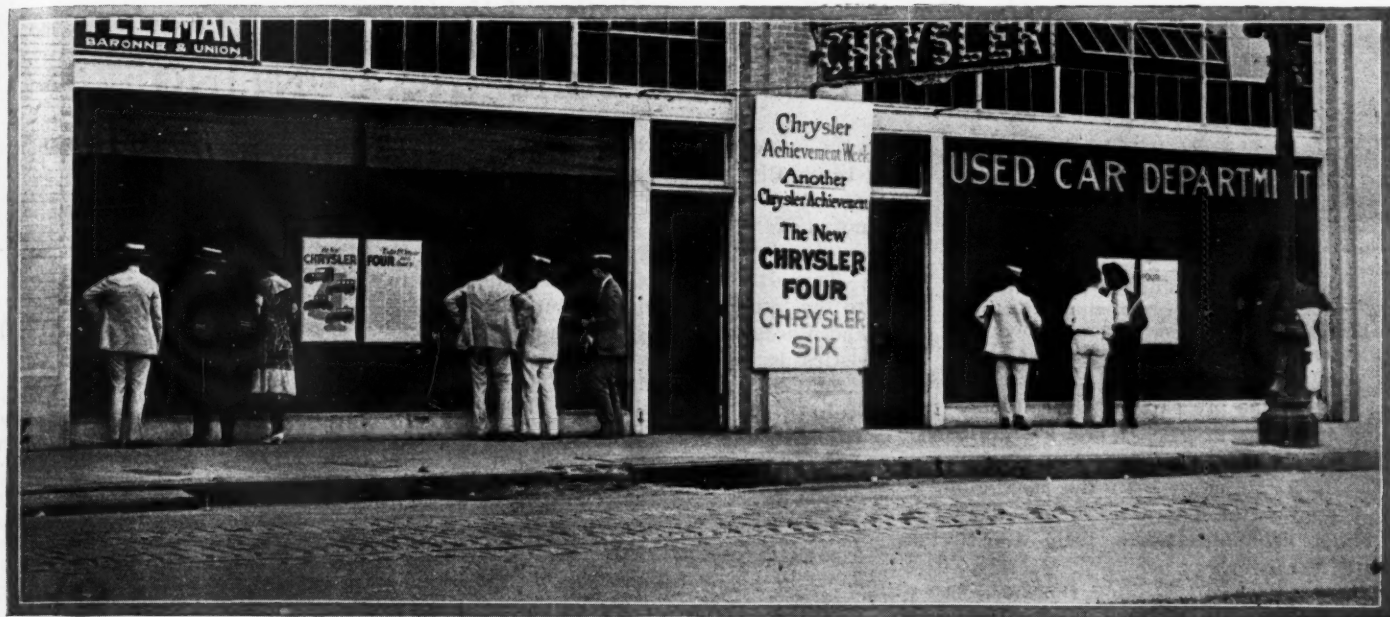
An air of mystery surrounded the advent of the new Diana in New York. Private showings were first held to which admission was gained only by invitation. This so whetted the curiosity of the public that when the show rooms were finally thrown open for inspection there was a steady stream of visitors to view the new vehicle. The suspense element proved to be a potent sales stimulus.



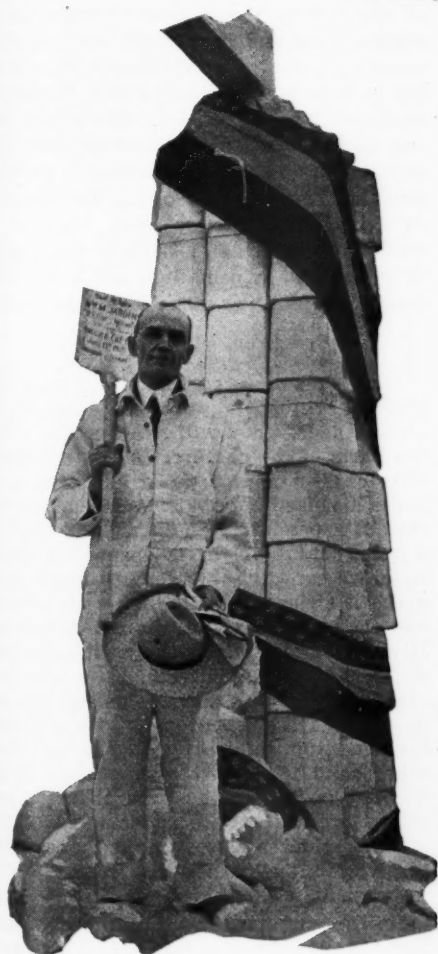
WHAT'S WHAT IN DISPLAYS.

Broadway salesroom of the New York branch of Stutz Motor Car Co. of America exhibiting a special roadster body. The background is a red brick wall with a picket fence coping in white. A white picket gate hinged on one end of the wall allows access to the automobile for inspection. The flooring gives a reproduction of flagstones with real moss growing between the stones. Around the garden wall growing out of real earth and grass are various colored hollyhocks.

OF AUTOMOTIVE INTEREST



MAKE 'EM INVESTIGATE—THEN SELL 'EM. The Chrysler Four was introduced in New Orleans by covering the windows of the showroom by a coat of orange paint, leaving six portholes in each window. Curiosity got the better of the people in the picture, and, it might be remarked, the men seem to predominate.



OPENS HIGHWAY AT SALT LAKE CITY. Secretary of Agriculture Jardine with inscribed silver shovel presented to him to dig away salt barrier blocking way through an arch built of solid salt.



SIMPLIFYING UNLOADING. Mack Motor Truck engineers have devised this ramp-track method of unloading special containers which are deposited by simply driving in and backing out.



A CLIMBER. Marmon 4-passenger speedster owned by distributor at Berlin, which finished fifth in the Hainberg Hill Climb. It is a stock car and competed mainly with special racing cars and others especially prepared for the hill climb.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems
 BUILDING - ELECTRICAL - FLAT RATES
 SHOP - LEGAL - PAINT & TRIM - ACCOUNTING

Horse Power, Carbureters and Wiring

Q.—I have a Lexington car, motor number 7W-66675, model R. R., 3¼-inch bore and 4½-inch stroke. I want to know the horsepower and revolutions per minute of this motor. Give the maximum r.p.m. and what speed I can expect from a good running motor in this car.

The power and torque characteristic of this engine are shown at the illustration at bottom of page. With everything in good shape you can expect as much as 200 R. P. M. more than the maximum indicated on the diagram. In good shape this car should make a little over 55 miles per hour.

Q.—I have an L4 Zenith carburetor and would appreciate it very much if you would send me the right numbers of the jets and compensator and all the sizes necessary so that I can use it on the Continental motor used in the Lexington model I just mentioned.

Horizontal Carburetor Required

You do not give us the serial number of the car but, according to the Zenith service manual, this engine requires a horizontal type Model HP44 carburetor with the following internal specifications: No. 19 choke, No. 90 main jet, No. 95 compensator, No. 50 idling well and No. 30 needle valve seat. The HP series carburetor takes the same internal specifications as the 14, so that if you do not wish to go to the expense of securing a new carburetor it probably will be all right to secure a special elbow in order to adapt your vertical type carburetor to the horizontal installation. In other words, you will want a short manifold in order to allow you to hook up the vertical type carburetor. This manifold can be secured from the local representative of the Zenith Carburetor Company or from the factory direct.

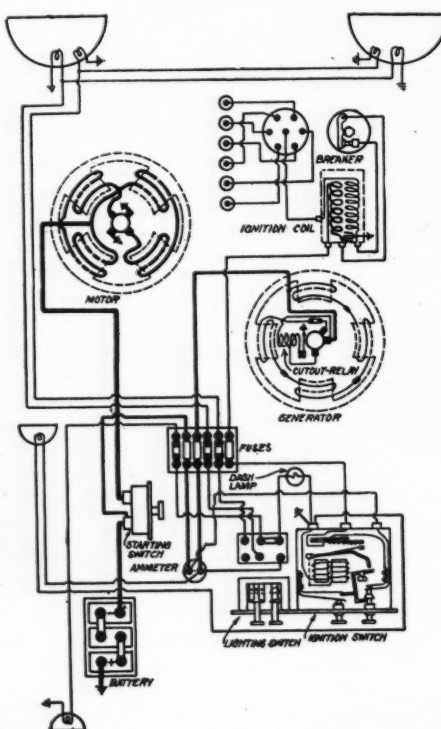
Q.—Send me directions for adjusting the Rayfield in this car. I believe it is a model M carburetor.

Before adjusting be sure that there are no obstructions in the gas line and that all connections are tight and free from air leaks. The valve and ignition should be properly timed, and be sure that there is a hot spot and good compression on all cylinders. The Model M Rayfield carburetor has two adjustments, one for low speed and one for intermediate and high speed. The low speed adjustment, which is the one located nearest the flange where the carburetor attaches to the cylinder, should be turned to the right or left as required until engine runs properly at low speed.

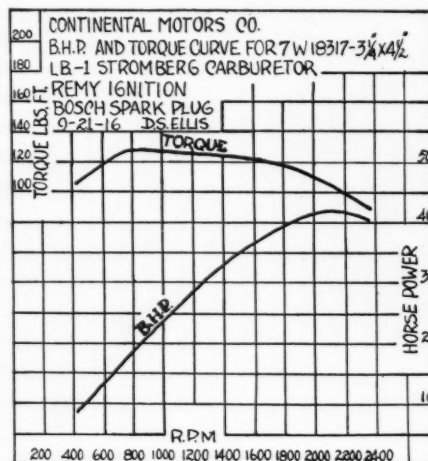
The high and intermediate speed adjustment is located out toward the hood

from the low speed adjustment. To get at it it is usually necessary to remove the hot air elbow from the main air valve. Do not move this high speed adjusting screw more than one-eighth turn at a time. Turn it to the right for a richer and to the left for a leaner mixture. The low speed adjustment has the same characteristics in that it is turned to the right for more gas and to the left for less gas.

Q.—What is the gear ratio for this car?



Wiring of Model RR Lexington



Lexington horse power and torque curves

Unfortunately, this information is unavailable for this car.

Q.—Give a wiring diagram.—Jerry Cervenka, 2321 Sawyer avenue, S. Chicago, Ill.

Wiring diagram of the Model R. R. Lexington is illustrated on this page.

The Cause of Vibration in Engines

Q.—What causes an engine that is balanced in every way to vibrate at certain speed. I have a 1924 Oakland that vibrates at a speed of about 48 miles per hour. Below and above that point the operation is all right. What is engine vibration and why is it loud enough so it can be heard. I was told by a dealer that it is the torque of the engine but what torque was he didn't know.—John Strieff, Milton Junction, Wis.

The chief cause of vibration is the motion of the reciprocating parts such as pistons and connecting rods which go up and down in the cylinders. At the end of the stroke these have to come to a sudden stop and then must start in the other direction. The rapidity with which the pistons move up and down of course varies with the car speed. The faster the car goes the faster the pistons jerk up and down. The noise is caused by the fact that certain parts of the car happen to be constructed so that they will naturally vibrate at a certain frequency very much as a pendulum has a certain speed at which it swings back and forth.

Synchronous Vibration

When the reciprocating parts such as pistons are moving up and down at a certain speed they will synchronize with the parts of the car that can be vibrated. This causes them to keep vibrating and make a noise. Comparing this action to that of a pendulum again we find that if a very heavy weight is suspended by a rope, we can give the weight a push and make it swing. It will then swing back and then swing in the original direction. If we again give it a push as it starts to go in the original direction, we will increase the amount of the swing and if we time each push properly, we can get the pendulum to swing violently. On the other hand, if we push or knock a weight without regard to the natural swing or period we will not produce any appreciable action, for we are just as likely to give it a push when it is coming back as when it is going.

In the engine this accounts for the fact that at only a certain speed is vibration likely to be very pronounced, and nearly all cars have some critical speed at which the vibration is noticed, while above and below this speed the operation is very much better.

Planning Your New Building

By TOM WILDER

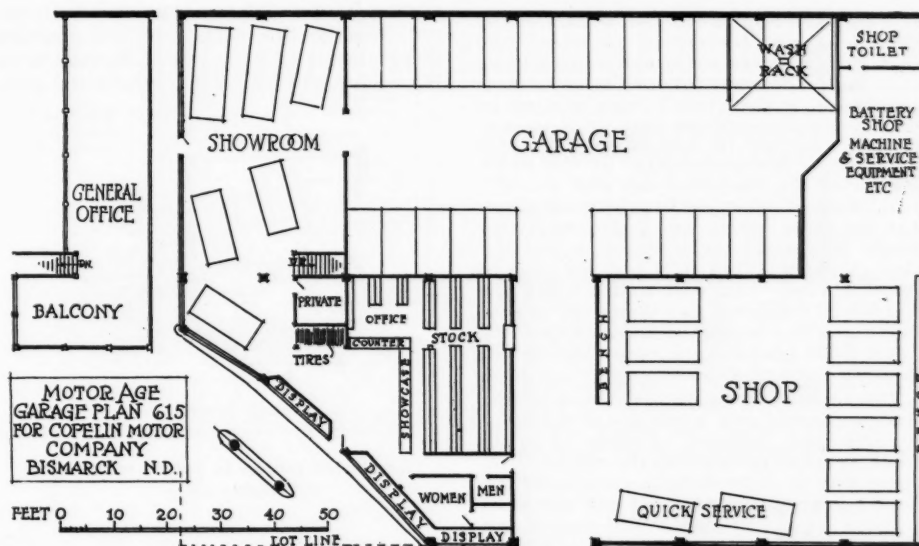


Filling Station to Boost Accessory, Parts and Service Sales

Q—We are planning on building a new garage, starting at a very early date. Our property is a corner lot on a main highway, one hundred foot front by one hundred forty foot deep, facing south. We plan on a filling station on the southeast corner. We have the Ford contract here, selling about two hundred fifty cars yearly and a parts business of about \$35,000 yearly—Copelin Motor Co., Bismarck, N. D.

Your lot is especially well located and well sized for the building you wish to put up. Dividing it with a row of posts through the center, you have a good garage on one side and plenty of space for a well equipped repair shop on the other. A corner filling station always cuts into a building rather awkwardly but here it seems to give less trouble than usual. The accessory and parts departments fit in very nicely, so that there is not so much waste in the angular section as in most cases. The rest rooms are so placed that customers will have to pass the accessory show cases to reach them, which is always a feature which makes selling opportunities.

While you did not suggest it in your letter, we think it would be a good plan to make the first three bays of this building higher than the rear section, thus giving opportunity to install a balcony office. You will note that in our plan, this balcony extends over the front section of the garage and also over the parts office and counter, small private office and tire rack. If you do not approve of this balcony plan you can



The stockroom is handy to both shop and sales counter and the garage is roomy

take a strip of the front part of the garage moving the showroom sufficiently back, so as to give you the necessary space.

While you probably have very good opportunities for window lighting, especially if there is an alley back of the building, we would suggest a few skylights in order to get light to the interior of the shop, the garage and the stock-

room. The wash rack also should be well lighted. The roof of this building is planned to be supported on trusses which are carried on piers in the side walls and on the row of columns through the center of the building. These trusses should have their lower side about 12 feet from the floor, except the three front ones, which, if the balcony is used, would need to be 18 to 20 feet above the floor.

Legal Questions Answered—

By WELLINGTON GUSTIN
of the Chicago Bar

SATISFYING CLAIM THROUGH SALE

Q—Will you please advise me what legal steps should be taken in regard to a car left for storage and uncalled for?—Park Garage, Storm King Highway, Cornwall-on-Hudson, New York.

You may sell the automobile at public auction and apply the proceeds first to the costs of selling, then to the satisfaction of your claim.

But before such a sale, you are required to serve a notice upon the owner, if he can be found within the county, but if not so found, then the notice may be served by mailing it to him at his last known place of residence or to his last known post office address. A like notice must also be served upon any person who shall have given you notice of an interest in the property subject to the lien. This notice shall contain a statement of the following facts:

- (1) Nature of the debt and an itemized statement of the claim and the time when due.
- (2) A brief description of the personal property.

(3) Its estimated value.

(4) The amount of the lien at date of the notice. This notice shall also call upon the owner to pay the amount of such lien, on or before a day named, not less than 10 days from the service thereof; and the notice shall state the time, when and place where the sale is to be made, if such amount is not paid.

You are entitled to collect on storage until date sale is made or claim is paid, but to do so your notice must contain a statement that such additional sum is demanded.

Then you are required to make oath to the statement that the lien is valid, that the debt upon which the lien is founded is due and has not been paid and that the facts stated in the notice are true to your knowledge and belief.

Each sale of personal property to satisfy a lien thereon shall be at public auction to the highest bidder, and must be held in the town or city where the lien was acquired. Now after the 10 day

period given in the notice, another notice of the sale must be published once a week for two consecutive weeks, in a newspaper published in the town or city where the sale is to be held, and such sale shall be held not less than 15 days from the first publication. If there is no newspaper in the town, then the notice must be posted at least 10 days before such sale in not less than six conspicuous places in the town. This notice of sale must describe the property to be sold and give the name of the owner or person for whose account the same is held and the time and place of the sale.

The owner is permitted to redeem his property before a sale by paying the garagekeeper the amount due on the lien and whatever legitimate expenses have been incurred in serving the notice and advertising the sale.

The statute also contains provisions regarding disposition of the proceeds of the sale.



Clearing Up Electrical

EDITED BY A. H. PACKER

A Flat Spot on the Commutator—Who Can Explain?

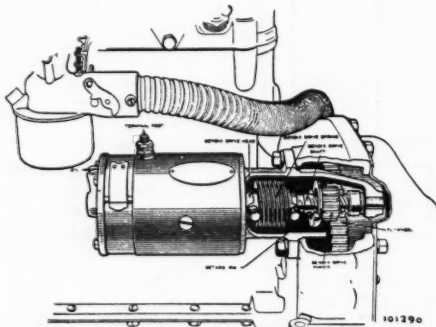
Q.—I have been a constant reader of the Clearing House for several years and find that your answers are usually correct and that the readers will always come to your assistance, if need be. I have noticed on two different occasions that your answer to the question in regard to flat spots burning on the commutator of the Remy starter of the Chevrolet car was not correct. Your suggestion that the trouble was due to loose wires on the commutator would be correct for troubles of this nature in general, but it is not the case in this instance. You will notice when the starter is cranking the Chevrolet engine that there is a thump or jar each time the motor goes over compression which is due to strong compression.

This jar is transmitted through the starter gearing and armature to the commutator and brushes, causing them to throw sparks thus burning the commutator. There may be some definite relation of the starter gear to the flywheel and the compression of the engine which causes the commutator to burn on one side. Of course, if it starts burning it will continue to burn in that place. The remedy is to turn the commutator down in a lathe which however, is only temporary. To make a permanent repair it would probably be necessary to install another pair of brushes and brush holders in the places provided for them, connecting them in parallel with the other brushes, thus cutting the current to each brush in half and distributing the current more evenly on the commutator as was suggested by Wolf's Garage in the May 14th, issue of MOTOR AGE. G. E. Fretz, Electrician, 614 W. Fifth St., Pratt, Kan.

It is interesting to consider the operation of the starter and the effect of compression. We doubt however, if this completely tells the story. On the starter pinion there are 12 teeth. On the flywheel there are 120 teeth for model 490 and 122 teeth for the Superior model. In each case the starter pinion makes approximately 10 revolutions for each revolution of the flywheel. When one of the pistons is coming up on compression the engine and consequently the starting motor will run slower and when the piston goes over compression it will speed up again. If the period of comparatively slow speed running should take one tenth of a revolution or only 36 degrees on the flywheel it would mean that the commutator makes a complete revolution so it would be hard to figure how any one place on the commutator would be burned due to slowing up.

There is another possible explanation which the illustration of the starting motor may make clear. When the flywheel kicks the Bendix pinion out of mesh the pinion runs forward as shown in the illustration and the teeth no longer mesh. When the driver takes his foot from the starter button the starting motor is then allowed to stop. It then occurs to us that the weight on one side of the Bendix pinion may have the effect

of causing the armature to stop in the same position nearly every time. If this happens it means that every time the starter is operated the brushes are in approximately the same position on the commutator. As the initial current is in the vicinity of 500 amperes and the run-



The starter pinion is out of mesh when engine stops

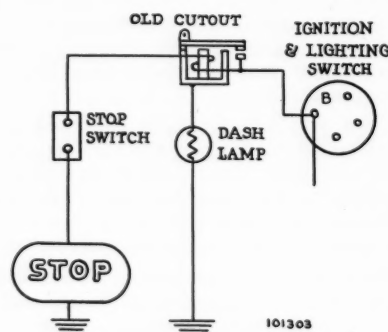
ning current only about 100 to 150 amperes it would indicate a reason for the burning occurring in one place.

WANTED—A ½ VOLT, 2 AMPERE BULB FOR PILOT LIGHT

Q.—Give wiring diagram for stop light with a check light on the dash, to show when the stop light is working. Also give the proper bulbs to use. The battery is a 6-volt battery.—L. B. Draper, 7220 Nagle avenue, Detroit, Mich.

This matter has been taken up with two of the largest lamp manufacturers and they state that no bulb which is suitable for this purpose is made at present. When dash lamp and tail lamp are in series, two bulbs, each rated at 3-4 volts may be used for they are both of the same size, that is, 2 candlepower. However, when you try to use anything larger than the 2 candlepower in the stop light, you will find that there is no suitable lamp to go with it for use in the pilot lamp. We understand that one stop light has been made with a special low voltage high current small bulb for use as a pilot light, but these do not seem to be available on a replacement basis.

We are showing a wiring diagram



Circuits for pilot light used with a Stop Signal

which gives a method used in another stop light. This is to use a magnetic relay or electrically operated switch. The current from the battery terminal on the ignition and lighting switch goes through the heavy winding of the relay to the stop switch which is operated by the brake pedal. When the circuit is completed through the stop light the magnetic effect of this current closes the contacts of the cutout and completes the circuit through the pilot light on the dash.

If the current does not go to the stop light, then the dash lamp will not light up. The circuit using the pilot light in series with the stop light would be from the switch to the pilot light, then through the stop switch and finally through the stop light, but as previously stated, bulbs are not made which are suitable for this purpose. You might try a 3-volt, 2-candle power lamp in the dash and a 6-volt 4-candlepower lamp in the stop light, but we do not believe the results would be perfectly satisfactory. If an old cutout is used, the fine winding could be discarded and the heavy winding only used.

To Make A. C. for Growler

Q.—Give the name and address of some electrical company that carries new and second hand motors and generators.

This information will be given by letter.

Q.—We have a growler which operates on 110 volts, 60 cycle single phase current and we do not have any power of this sort. We need a ¼ horse power alternating current generator, 110-volt, 60 cycle. Could a ¼ horse power—110-volt, 60 cycle single phase motor be changed over to a generator without much trouble.—George G. Thomas, Rural Valley, Pa.

We do not believe the motor can be changed over as motors of this sort are usually inductor type which are not suitable as generators. A growler is sometimes operated by means of battery and a vibrator. It is necessary, however, to have a vibrator, the coil of which has a very low resistance. One type which at times has been used successfully, is the Old Delco ignition relay used in 1910 or 1911 Hudson cars, these being located at times in automobile wrecking establishments.

The vibrator of a Ford coil might serve this purpose if the secondary winding were removed. We faintly recall at one time a subscriber mentioning some experiments made in using the magneto current from a Ford car for operating a growler. It would appear as if the voltage of the Ford magneto would be too low and might require rewinding the growler, so we cannot recommend this procedure. The alternating current generator giving the correct voltage would be the best device to use.

Trouble With Bill Fixit

EDITED BY A. H. PACKER



Does a Ford Generator Lose Residual?

Q—Supply wiring diagram of the new 1925 Chevrolet.

This diagram is shown in accordance with your request, it being correct for both 1924 and 1925 cars.

Q—I have a Ford generator here which continually loses its residual magnetism. If the car is left for two or three days the generator will not build up, but by putting battery current into the field it will build up and charge all right. The generator and cutout seem O. K.—Reginald H. Trevor, Blubber Bay, B. C., Canada.

The usual trouble when a Ford generator will not build up is caused by oil from the rear end getting on to the commutator and being soaked up by brushes. This condition can be remedied by installing a new set of brushes and then omitted the oiling or else oiling very carefully, putting in not more than one or two drops at a time. It is of course, possible that there is some other trouble such as a poor connection between field coils.

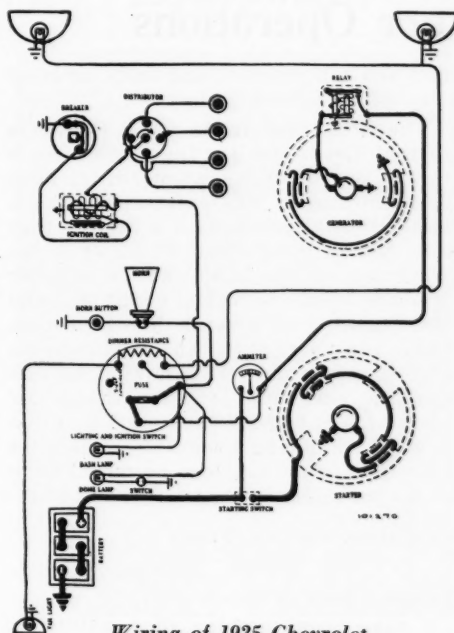
Energizing the magnetic field with battery current makes the machine generate enough voltage to cut through any insulating film on the surface of the brush or through any poor connection of the field coils and after the current once starts to flow the resistance is not sufficient to stop it and the generator keeps on working. While the engine is warm and the generator is also warm the oil in the brushes is thin and does not act as an insulator. When the car is allowed to stand for two or three days, however, the oil congeals and forms an insulating film between the brush and the commutator.

BATTERY REVERSAL TEST

Q—Why are some of the cars arranged to have the positive post of the battery grounded and others the negative? If a car has its battery removed before you start working on the car, how can you tell without trying the battery and damaging the electrical system whether you have the connections right or wrong?—C. Nelheiser, 1130 Lovers Lane, Akron, O.

In most cars it does not make any difference whether you have the battery one way or the other if the cutout points are once closed by hand, so as to magnetize the generator in the proper direction. Of course, if the wiring is laid out to have the positive grounded and you ground the negative instead it will cause the ammeter to read the wrong way showing charge when the lamps are turned on and showing discharge when the generator is sending current to the battery. Aside from this no harm results.

One exception is the Dodge Brothers



Wiring of 1925 Chevrolet

car where the horn is connected to the live side of the battery. With the negative grounded and the horn positive, it has been found that corrosion takes place in the horn much as it does at the positive battery terminal. For this reason when the horn circuit was changed a change was also made in the battery, so as to ground the positive and have the negative end connected to the horn. The simplest test to make when installing a battery is to turn on the lights and see that the ammeter shows discharge. If it shows charge when the lights are turned on, it indicates that you have the battery reversed.

ZENITH CARBURETER SPECIFICATION

Q—Please send me by return mail proper model number and jet sizes of Zenith carbureter to fit the Maxwell 1920 model.—John Lettellier, R. F. D. No. 2, David City, Nebr.

Zenith specifications for this car call for a carbureter model 04 with a No. 19 choke, No. 90 main jet, a No. 95 Compensator and a No. 45 idling well. Other fittings necessary are as follows:

- Throttle lever.
- Hot air sleeve.
- Hot air sleeve lever.
- Hot air stove.
- Manifold adapter.
- No. C-1518 right.
- No. C-2477 with bracket No. E-1459.
- No. D-1460.
- 1½ inches by 7 inches long.
- No. 4.
- No. B-753 union body.

Taking a Chance on Fordson Magneto Charging

Q—I read your article on charging Ford magnetos in the March 12, 1925, issue of Motor Age on page 26. I would like to have similar instructions on charging the Fordson tractor magneto.

The difficulty with the Fordson magneto is in properly setting it for the compass cannot be located in such a position that it will give definite results. One method suggested is to use a 6 volt battery and connect from the magneto terminal to the frame of the engine. When this is done there will be a magnetic attraction between the flywheel and the framework which holds the magneto coil. When the magnets are in the proper position this attraction and the accompanying thud or knock will be most pronounced, while the attraction will be slight when the magnets are in the wrong position.

If the crankshaft is pushed backwards after each test with the battery and if the engine is turned over by hand with the spark plugs removed, it is possible that a place will be located where the thud is most pronounced. If this position can be accurately determined it is the right place to leave the flywheel and magnets while the charging work is being done. The battery can be connected either with negative or positive to the magneto terminal in making this test, but whichever way it is connected, the same connection should be used when using 24 volts instead of 6, for the recharging process. You can readily see that this method would be quite experimental and should only be done as a last resort in case the magneto is inoperative.

Leaving Switch On Burns It Out

Q—Is there a relay cutout in the generating circuit of the 1923 Oldsmobile Six. We have been unable to find one on this car and when the switch is accidentally left on it burns out the switch or wires?—Kelly Johnson, Johnson's Garage, Mazon, Ill.

There is no cutout and the operation of the ignition switch supplies battery current to the ignition coil and to the generator, while stopping the engine shuts off the ignition current, also disconnects the generator from the battery. The current that the generator will take when the engine is not rotating should be in between 15 and 20 amperes and the ignition current would be about five amperes more if the interrupter points happen to be in contact. The answer of course, is that the driver of the car should become accustomed to watching the ammeter and when he sees a very heavy discharge should turn off his switch, if he has not done so previously. Twenty-five amperes is a fairly heavy current and in time might cause some overheating especially if at any point the connections are not very good.



Motor Age's Flat Rate Forum

EDITED BY B. M. IKERT

Importance of Major Operations

MOST of the present day flat rate systems are made up of several major operations together with various minor operations to go with them. The major operations play a very important part in the selling of flat rate. For instance when several jobs have to be done on a car there may be but one or two major operations, the execution of which allows the other operations to be performed at the same time.

To make this clear suppose a car comes into the shop and the owner says there is a knock in the engine, that the engine does not pull well and fires irregularly. Assuming that the car is turned over to an inspector or trouble shooter the latter may report that the bearings need taking up, valves must be reground with a possibility that a few need replacing and the carbon must be cleaned out and the oil pressure relief valve setting must be changed.

The above operations can be performed under two major operations these being, first, the removal and installation of oil

pan and the removal and installation of the cylinder head.

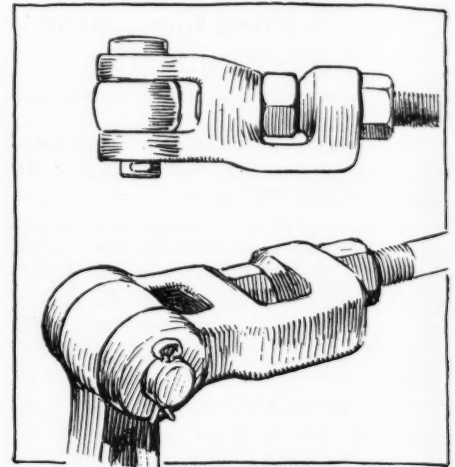
The first thing to do when there are several operations like this to be done is to find the major operations which must be performed to take care of the others. If additional operations are desired they can then be done also. Thus, while the crankcase oil pan is off and the cylinder head has been removed, it might be found that there are several loose pistons. These can be removed and replacements effected while the job is down. In this way the customer pays for the major operations but once, whereas if he came back the following week for example, to have the pistons replaced he would have to pay for the major operations as before.

Conditions Govern Prices

Lansing, Mich.

To the Editor of MOTOR AGE:

I have been thinking of installing a flat rate system in my garage but do not know just how to arrive at the prices to charge for the various opera-



THINGS WHICH HELP FLAT RATE

This shows a form of yoke end used on brake connections in which adjustments can very quickly be made without having to remove the clevis pin. It is done by merely loosening the lock nut and turning the nut in the center, after which the locknut is set up tight

MOTOR AGE'S FLAT RATE FORUM

No. 22

CHRYSLER FLAT RATES FOR PISTONS, PISTON RINGS AND PISTON PINS

Manufacturer's
Official
Designation

	Time
7040 Remove and install new pistons and rings, new pins if necessary, including removal and installation of cylinder head and oil pan, check connecting rod bearings, and align rods.....	9½ hrs.
(a) Install new connecting rod in conjunction with above.....	No extra charge
7041 Remove and install one new piston, new rings and pin if necessary, including removal and installation of cylinder head and oil pan, align connecting rods and check bearings.....	3½ hrs.
(a) Each additional cylinder, add.....	1¼ hrs.
7042 Remove and install piston rings, full set, including removal and installation of cylinder head and oil pan.....	8 hrs.
(a) New pistons or pins in conjunction with above, etc.....	½ hr.
7043 Remove and install piston rings in one cylinder, including removal and installation of cylinder head and oil pan.....	3 hrs.
(a) Each additional cylinder.....	1 hr.
(b) New pistons or pins in conjunction with above, each.....	½ hr.
7044 Remove and install piston pins, full set, including removal and installation of cylinder head and oil pan, align connecting rods and check bearings.....	6 hrs.
(a) Install new pistons or rings in conjunction with above, add, each cylinder.....	½ hr.
7045 Remove and install one new piston pin, including removal and installation of cylinder head and oil pan, align connecting rod and check bearings.....	3½ hrs.
(a) Each additional cylinder, add.....	½ hr.
7046 Remove and install piston pins, customer brings parts in, each In the first five of the above operations the company advocates recommending to the customer operation No. 6906 which reads —Grind valves, adjust tappets, and turn engine when cylinder head has been removed for some other operation.....	½ hr.
	5½ hrs.

tions. How is this done in other shops and does the same price hold good on a job all over the country. That is, does the price for grinding valves on the Buick, for instance, in the case of one dealer's shop apply in another Buick dealer's shop 1,000 miles away? I would appreciate being set straight on this.—T. W. H.

Prices for flat rate operations vary in different localities, because conditions are different. The price of labor varies and usually you will find that the prices for flat rate operations are slightly lower in the smaller communities as compared with those in large cities. Labor is higher in the larger cities and it naturally makes a difference in the price of the job to the customer. Flat rates are based on \$1, \$1.25, \$1.50, \$1.75 and \$2 an hour depending upon local conditions. The price you charge must be based on the price of labor in your community. You can get these prices by referring to MOTOR AGE's Flat Rate Manual. These prices easily can be adjusted to suit your operating conditions.

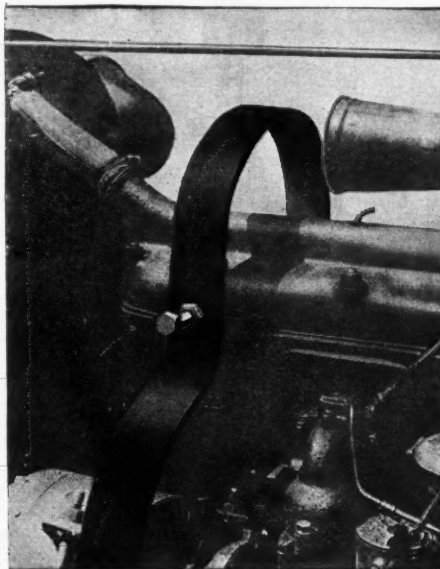
Many of the motor car companies are establishing a flat rate price for various operations to be the same all over the country, so every one of their dealers will have the same fixed price for the operations to quote customers. This naturally has advantages in that an owner of such a car if on a long trip will be assured paying the same prices for maintenance work he is used to in his own locality.

THE MARKET'S NEW OFFERINGS

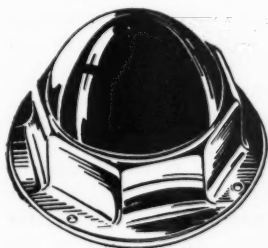
Accessories—Equipment—Supplies

Clark Motor Stabilizer

ELIMINATION of the vibration common to four-cylinder, three-point suspension engines is said to be accomplished with the Clark Motor Stabilizer, invented by E. E. Clark, of Junction City, Kansas, and manufactured by Weldon and Company, Thirteenth and Oak Streets, Kansas City, Mo. This device is said to be so designed that it holds the top of the engine when the piston exerts a side thrust against the cylinder wall, thus preventing its oscillation and tendency to rotate with the crankshaft. Installation is accomplished simply without special tools and the attachment does not interfere with any other special equipment on the car. It is not necessary to remove the stabilizer in order to remove the cylinder head for shop jobs. Prices range from \$5 to \$6.25 according to the car for which the stabilizer is designed.



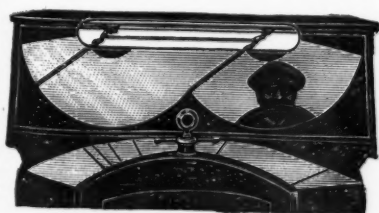
Clark Motor Stabilizer



Running Board Light

Tiffany Courtesy Lamps

TIFFANY Manufacturing Company, 42 Spring Street, Newark, N. J., is producing courtesy or running board lights that are both artistic in appearance and hard to damage. The lights are known as Model CL 2. They have heavy ribbed beehive lens. The shell is of brass, heavily nicked and highly polished. All parts are rustproof and heavy gaskets make the lamps waterproof. They come in pairs, a red one to be installed on the left side and the green on the right. List price \$3 a pair. Dealers prices in lots of one to nine pairs come at \$2 a pair while lots of ten or more pairs are priced to dealers at \$1.80 a pair.



Fulvishun Windshield Cleaner with double wiper feature

A Tip From the Umbrella Seller

Rainy spells and other temporary weather conditions are profitably capitalized by merchants in various lines. A rainy day is sure to suggest an umbrella display to one, raincoats to another and perhaps rubbers to another.

The sale of an umbrella not only brings a profit on that item but the fact that it is raining causes the customer frequently to linger in the store, with the chance that he might buy something else and be cultivated for future business.

With the automotive merchant such articles as tire chains and windshield cleaners can be applied to the same purpose as umbrellas at these other stores. The state of weather will emphasize the value of the items displayed and help prolong possible selling contact with the customer.

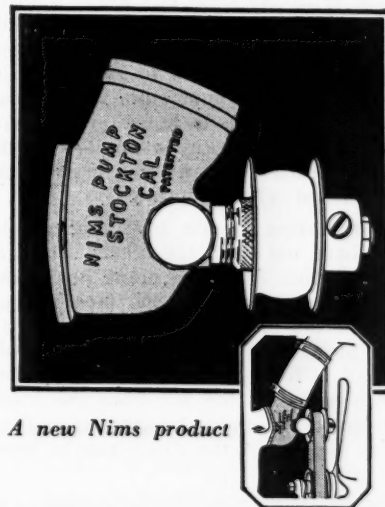
Fulvishun Windshield Cleaner

A SMALL, easily folded bracket which when attached to the ordinary windshield cleaner will keep the entire windshield free from moisture is what is offered in the Fulvishun Cleaner by the Metal Stamping Company, Long Island, N. Y. The Fulvishun Cleaner is said to accomplish a complete job of clearing up the windshield through operation of its double wiper. Five minutes or less is all required for its adjustment and the Fulvishun Cleaner costs \$1.25.

Co-Pa-Lite Windshield Glass

A SPECIALLY designed windshield glass for the upper section of the windshield which is said to afford the driver a clear vision that will show the exact location and position of any passing automobile having bright lights is being produced by the Co-Pa-Lite Windshield Glass Company, 242 Fourth Avenue, Pittsburgh, Pa. It is known as the Co-Pa-Lite Windshield Glass. The special grinding and polishing of this glass diverts the rays of an approaching light to a given point on the windshield and is recommended by the producers as an essential to safety in night driving.

The Co-Pa-Lite glass is simply substituted for the old glass in the upper windshield section. It is made of plate glass and cut to full sizes and to measurements when given, with instructions as to installation accompanying each unit. The Co-Pa-Lite company will furnish dealers with full information.



A new Nims product

Nims Pump for Fords

WHAT the manufacturers offer as a practical and highly efficient water pump for Fords is being produced by the Nims Pump Company, Stockton, Cal. These pumps are installed on the front of the engine in place of the regular water outlet manifold. By making the installation at this point no change is necessary in the fan, fan belt or the fan belt drive. Nor does the pump interfere with the Thermo-Syphon system. The pump housing and bearings are made of bronze, the bearing being constructed with a special end—thrust shoulder—which is said to eliminate leakage. The Nims pump's fuel consumption is 1/20 H.P. Price \$5. A larger pump similar in design sells at \$15.

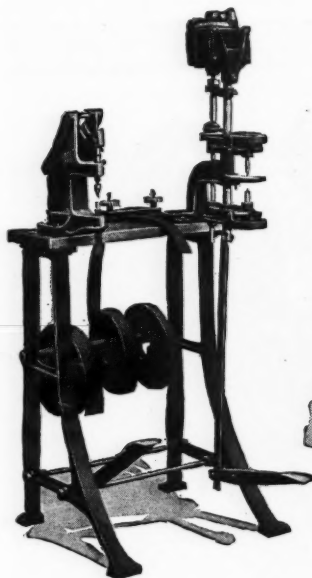
GETTING MORE OUT of the SHOP

Manley Combination Brake Relining Machine

The Manley combination brake relining machine is a countersinking and riveting machine built in one unit.

It consists of a Manley drilling and countersinking machine and a Manley heavy duty riveting machine, mounted on a bench, supported by heavy duty iron legs, with natural wood top; and provided with a clamp for holding the brake lining while cutting.

A rod for holding the rolls of brake lining is also provided. The price complete without motor is \$76. If adaptors for electric drills are desired the size and make of drill used for motive power must be specified. It is built by the Manley Manufacturing Company, York, Pa.



Left: Manley combination brake relining machine; right: Dreadnaught wrecking crane

Dreadnaught Wrecking Crane

A universal wrecking crane having 80 lbs. of lift to every pound pressure applied to the crank has been brought out by Kraus-Bridgers Company, Florence, South Carolina. A unique link construction at the top of the boom permits pulling or lifting from any angle without binding on the cable. The boom is made from one piece of heavy channel steel and is easily adjustable to any elevation by lengthening or shortening the braces, which have a series of holes for this purpose. The crank can be applied to the shaft on either side and two cranks can be furnished when required.

By removing a pin and pulling the crankshaft outward the gears are unmeshed which frees the cable drum and allows the hook and bottom tackle block to be carried to the work. 36 ft. of high grade plow steel cable having a tensile strength of four tons is furnished. When a disabled car is too far from the crane or is down an embankment and a long pull is necessary, the drum can be used

as a winch by taking out two pins and removing the cable from the blocks. The distance from the base to the top of the boom is 60 in. The length of the base is either 40 or 46 in. while the width with the flanges turned in is 32½ in. and with flanges turned out 37½ in. The distance from the shaft to the floor is 20½ in. and the length of the crank from end to end is 30 in. The price of this crane is \$75.00. If desired 72 feet of cable on the drum can be furnished for \$7.50 extra.

Gas Fired Automobile Cleaner

A gas fired cleaner for washing cars and removing paint and grease has been brought out by the Eclipse Fuel Engineering Co., 814 S. Main street, Rockford, Ill. The device consists of a small steam boiler, container for the cleaning chemical and a sprayer with two lengths of

hose. One of the hose carries a high pressure supply of steam while the other delivers the cleaning composition which is mixed with the steam in the nozzle just before being sprayed over the parts to be cleaned.

When it is desired to merely clean the car a weak solution is used. But when paint or grease is to be burned off a few applications of full strength solution are said to remove all foreign matter almost immediately. Advantages of the device are said to be speed of operation and economy in upkeep. The cleaner is particularly helpful in removing the grease from engine parts as well as the chassis and a few sprays of the nozzle are said to leave the metal as clean as new. The regular model for cleaning cars sells for \$320, while the same outfit with attachment for paint removing sells for \$375.



Gas fired steam cleaning apparatus of the Eclipse Fuel Engineering Co. which is said to quickly and efficiently clean cars. A flue, not shown in the illustration connects to the boiler for carrying off the heat and gases

EDITORIAL

Inspiration in Selling

THE motor car salesman is engaged in a worthy business. He is in an exhilarating and inspiring enterprise, if he will only let it be so. What could be finer than providing the people with the miracle of modern individual transportation? And what could give more joy to sell than the vehicle of today, fleet of wheel, sturdy, dependable, comfortable, useful in the highest degree?

The motor vehicle is a comparatively new article of commerce, and one that is in universal demand. Yet it must be sold. It cannot be left lying on the shelf for the customer to come in and carry away. This year's car soon becomes a last year's model. The car must get on the street while it is young.

The missionaries of this great business are the salesmen who go into the homes and offices of the people to sell them automobiles. The salesman's job is one of responsibility and opportunity. He assumes the responsibility of representing not merely a particular make of automobile but an industry that in 25 years has grown to immense magnitude. This industry is worthy of the highest type of representative.

The automobile salesman has opportunity almost unlimited. He sells that which all men want. An article of the highest quality. Pleasure, comfort, recreation, profit, travel, sociability—all are delivered in constant supply with the article of merchandise that he sells.

The salesman of vision sees farther than the dotted line of the order blank. He sees the family on Sunday enjoying an outing that will give inspiration for the whole week; he sees them taking the children to the park for a picnic supper; from their own door to the theater and home again in the evening; bags, suitcases and all belongings whisked to the railroad station for a long journey; the children to school and back on a rainy day; to market and all provisions taken home and put away without the uncertain delay of store delivery; fresh vegetables from the country; the sense of freedom that a dependable motor car brings—these are some of the things that automobile salesmen of vision see and sell.

We need more automobile salesmen of vision and inspiration. Those who have these two qualities in full measure will make their own reward and it will be ample.

Clean Show Windows

IT is not the good fortune of every accessory dealer to have a good show window—one which would be considered ideal for the purpose of display.

The dealer who has any sort of a show window, however, is never handicapped with inability to keep

it clean and to see that the displays, small though they be, are maintained in neat, orderly arrangement.

One window, noticed a few days ago, contained a dusty and fly-specked display which obviously had not been given attention for months. The only saving feature was that the panes of glass were so beclouded with ancient accumulations of dirt the passerby would not often be tempted to strain his eyes in order to see what lay in the partitioned section beyond.

Perhaps this merchant would say he "hasn't had time" to look after the windows. If not, it would be better to have no display in them at all. Even the window which is not ideal for show purposes can be used to some advantage, but the first rule should be cleanliness. To make the display inviting it must be kept spick and span and fresh looking.

Say We "Buy" Them

NOW and then a bad word creeps into the lexicon of automobile merchandising. The Chicago Automobile Trade Association does not like the word "appraisal" and some time ago this body urged in substitution for "appraisal" the word "value."

This recommendation has been well received in many quarters as has the one originating in St. Louis which proposed adoption of "maintenance department" in the place of "service department."

There is something in a name and there also is much of something occasionally in the coloring of words and terms used to describe human activities. Maybe our trade dictionary is in need of revision.

If so, one of the words which should be stricken from its pages most enthusiastically is that unhappy, ill-conceived, misleading pet and profit wrecker—ALLOWANCE.

Why not throw out this word bodily and substitute for it the good business man's term—BUY.

Let's quit telling the prospect that we will make such-and-such an "allowance" on the old car and, like real merchants, tell him we will BUY it from him if in turn he buys a new car from us.

And then let's really BUY his old car at a price that will enable us to dispose of it in resale at a fair profit.

The word "allowance" is fundamentally unsuited to the dealer's purposes in its psychological influence. It often causes the merchant to forget that he really is a "buyer" who buys to sell at a profit. It is not to the point and it is not of sufficient directness to let the prospect know that he, himself, is offering something FOR SALE.

Automobile owners have been trained to regard an "allowance" as an indefinite something made largely of rubber. There is need for a reschooling. To offer to "buy" a car means—just that.

Registrations in U. S. Gain 13.7 Per Cent

Total for First Half Almost Equals Entire 1924 Figure

New York Leads With 1,332,168 With California Second and Ohio Third

NEW YORK, July 13.—Motor vehicle registrations in the United States totalled 17,548,377 on July 1, 1925, a gain of 2,108,407 or 13.7 per cent over July 1, 1924, according to a survey just completed by the Chilton Class Journal Company. Registrations for the first six months of this year are nearly as high as the 17,605,501 recorded on December 31, 1924, as the total for the whole of last year. Total registrations by the end of this year are certain to surpass those of 1924 by a good margin, indications now being that the December 31, 1925, figure will be very close to 19,000,000.

New York, as in previous years, holds first place, 1,332,168 cars and trucks having been registered in that state since the beginning of the year. California holds second position with 1,283,203 and Ohio is third with 1,232,943.

The real estate boom in Florida evidently has had a highly favorable influence on automobile sales in that state, the number of registration today being 51.2 per cent greater than on July 1st last year. This is the largest percentage gain recorded by any state. Texas has the largest numerical gain over last July with an increase of 191,710.

There are 6.47 persons per motor vehicle in the country today, population estimates of the Bureau of Census for July 1, 1925, being used as a basis for the calculation. Fees paid into the various state treasuries by automobile owners totalled \$218,333,826 for the first six months.

Motorcycle registration dropped again, registrations in the first six months of 1925 being more than 10,000 less than in the first half of 1924. The present total is 115,400.

Yellow Engine Works Sees Added Strength by Merger

MOLINE, July 11.—Louis Ruthenberg, general manager of the Yellow Sleeve-Engine Works of East Moline, today declared that merger of the truck division, General Motors Corporation, with the Yellow Cab Manufacturing Company would materially strengthen the engine works. He predicted that by the first of the year production would be doubled.

The East Moline plant's principal business is the manufacture of engines for busses and taxicabs produced by the Yellow Cab Manufacturing company. Three hundred engines are being produced each month at the present time and 350 workers are employed in the plant, Mr. Ruthenberg states.

Quake Fails to Hurt California Sales

NEW YORK, July 11.—No seriously adverse effect on automotive sales in the Far West is expected to result from the Santa Barbara earthquake. Late advices to the Chamber of Commerce of the United States, through its Pacific Coast representatives, show that Santa Barbara was the only community affected and that the major damage was confined to about one per cent of the city's business district. A tentative estimate by engineers of the cost of rebuilding the destroyed buildings and making them of modern construction was \$10,000,000 and California financial institutions have agreed to loan needed funds for rebuilding.

While the engine works is a distinct corporation in itself, its stock is owned by the Yellow Cab Manufacturing company.

Chrysler Corp. Assets Gain \$6,000,000 in Six Months

NEW YORK, July 11.—The consolidated balance sheet of the Chrysler Corp and subsidiaries, as of June 25, 1925, shows total assets of \$71,423,179 against \$65,442,814 for the old Maxwell Motor Corp. and subsidiaries on December 31, 1924.

Major items on the asset side are plant and equipment, \$15,715,338, a reduction of \$200,000; good will, \$25,000,000 unchanged; cash \$8,163,186, against \$5,680,611; acceptance and deposit certificates, \$7,311,007, against \$481,191; inventories, less reserves, \$10,055,842, against \$11,398,161. On the liability side, profit and loss surplus showed a big gain, standing at \$6,070,667, while accounts payable declined to \$3,262,264 from \$5,244,642.

Total current assets as of June 25 were \$25,654,324 and total current liabilities \$4,375,775, leaving net working capital of \$25,278,549. As of December 31, current assets were \$23,029,398, and current liabilities \$6,763,494, leaving net working capital of \$16,265,904.

VICTOR ADVANCES PRICES

SPRINGFIELD, O., July 11.—Sales are steadily increasing at the plant of The Victor Rubber Co., President H. H. Durr announces. Indications are that the company will have one of the best years in its history, he said. Business during May and June was far ahead of the same period in 1924. Victor has a new schedule of prices, effective at once. An advance of 10 per cent was made on tires and 15 per cent on tubes.

De Paolo Wins Inaugural At Baltimore-Washington

Italian Racer Announced Winner After Recheck—McDonough Is Second

WASHINGTON, July 11.—Peter de Paolo, winner of the Indianapolis speedway race on Memorial Day, today was declared the winner of the Baltimore-Washington 250-mile inaugural following a recheck.

It was first announced that Bob McDonough, protege and understudy of Tommy Milton, and the youngest driver on the track, had won the race, but it was later discovered that the timing devices had failed to register a lap for De Paolo and McDonough was found to have finished second, almost a full lap behind De Paolo.

Race officials under the supervision of Fred J. Wagner of the A. A. A. conducted the recheck. They said an official announcement from the A. A. A. would be forthcoming later.

De Paolo's time was 2:01:37 and McDonough's 22.28 seconds slower. The winner received a purse of \$9,000, McDonough, \$5,000, Harry Hartz, \$3,000, Fred Comer, \$2,000, Frank Elliott, \$1,500, Jimmy Hill, \$1,000, Tommy Milton, \$900, Ralph Hepburn, \$800, and Phil Shafer, \$700.

Milton's proceeds, however, were considerably more than the \$900 as he added McDonough's \$5,000 to his own as McDonough's employer. He announced that the youthful star would receive 38 per cent of the \$5,000.

General Motors Executives Plan European Inspection

DETROIT, July 11.—General Motors Corporation executives, including Fred J. Fisher, Charles Fisher, John J. Raskob, John L. Pratt, Charles S. Mott, Alfred H. Swayne and James D. Mooney, will shortly visit the various European countries to get more closely in contact with the export activities of the General Motors Corporation.

While abroad the party will inspect the corporation's subsidiary companies and assembly plants in London, Copenhagen and Antwerp in addition to making a survey of the motor car situation in England and the various continental countries.

The proposed trip according to President Alfred P. Sloan, Jr., is in keeping with the company's policy to send to Europe at various times different groups of its officers and engineers in order that they may be able to study at first hand the business and economic conditions of foreign countries with special reference to the importation of American-made automobiles.

Mack Bus Sales Advance 433 Per Cent Over 1924

Business for First Six Months 34 Per Cent Better Than All of Last Year

NEW YORK, July 11.—Sales of Mack buses for the first half of 1925 increased 433 per cent as compared with sales during the first six months of 1924, and were 34 per cent more than the total sales for the entire year of 1924, according to the semi-annual sales report of Roy A. Hauer, manager of the bus department, Mack Trucks, Inc.

Bus sales for the month just passed were 39.9 per cent ahead of May business and to date July promises to show further substantial gains over previous months. More buses were sold during the first half of June than during the entire month of May.

When January figures were published early in February, says the report, officials of the International Motor Co. pointed out that business for that month had established a bus sales record for any one month in the history of the company. Since January every month has shown substantial gains.

Mr. Hauer calls attention to the fact that business for the first half of 1925, as compared with 1924, is undisputed evidence of the increasing popularity of the bus as a public conveyance and that there is every indication that demand will continue throughout the remainder of the present year. It further indicates, says Mr. Hauer, that bus operators are rapidly discarding old equipment for new and standard buses of high quality.

Columbus Garages to Test Lights Before Police Drive

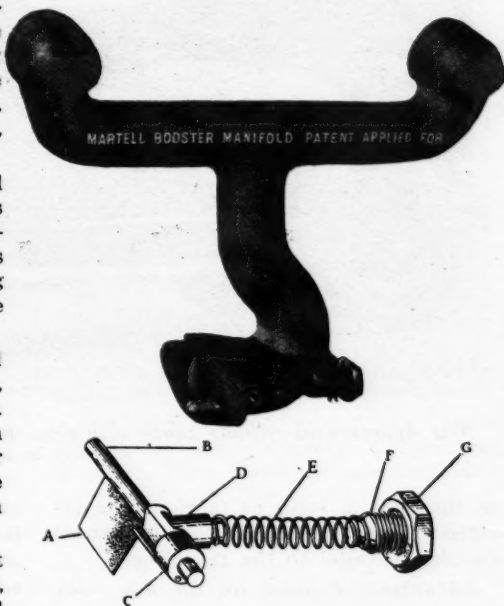
COLUMBUS, O., July 11.—Testing screens, now being made by the Yeager Tilt-O-Lite Co., will be placed in 10 different garages throughout the city to test defective automobile lights when the police campaign against them starts July 15. The campaign against defective auto lights will continue for 30 days, during which time no arrests will be made. It is intended to reduce automobile accidents in Columbus.

Tags now being printed will be handed to motorists whose auto lights are faulty. The tags will bear the names of the garages where the testing facilities are located, and will order the motorists, to whom they are given to report to one of the stations within 36 hours. A small fee will be charged for the testing.

On the tag will be indicated which of the nine classes of violation the motorist is committing. Officials of the test stations will advise motorists as to how to remedy their lights. After the 30 day campaign those still having faulty lights will be arrested.

Booster Manifold for Fords

In order to overcome the fluctuating suction through the intake manifold with varying piston speeds a manifold called the Martell Booster Manifold for Fords has been brought out by Albert A. Martell, inventor of the Martell reamer, and is distributed by the Russell Automotive Products, 2019 S. Michigan Avenue, Chicago.



Top—Martell Booster Manifold for Fords. Bottom view shows the valve mechanism which keeps the gas velocity more nearly constant

This manifold is about 40 per cent larger than the stock manifold at the carburetor opening and the valve mechanism as shown in the detail illustration provides means for keeping the gas velocity more nearly constant. The valve A is fastened to the spindle B which is mounted in the manifold, supported at its opening end by bushing C.

A cam surface formed on the enlarged portion of spindle B engages a follower D that resists the action of the valve, as influenced by the passage of the gas, by means of the pressure spring E. This spring E is adjusted to the correct tension by screw F locked by nut G and finally coterpinned, after setting to gage.

An air port in bushing C admits additional air after the valve A is partly opened.

On account of the formation of the cam surface on spindle B the pressure or resistance to the action of the valve A decreases as the valve opens. When the throttle is wide open the valve "floats" on the gas stream and maintains the velocity without in any way restricting the amount of gas. When the car is traveling at slow speed the valve is nearly closed, automatically reducing the manifold opening, maintaining gas velocity at any speed or throttle opening.

Ford Sets New Sales Mark Of 195,300 Cars in June

Retail Business 6,000 Automobiles and Trucks Ahead of Record Month Year Ago

DETROIT, July 18.—A new June sales record was established by the Ford Motor Company during the month just passed, when approximately 6,000 more Fords cars and trucks were delivered to retail customers in the United States than during the same month a year ago, which held the previous high mark for June.

Reports indicate a continued large volume of business through the summer months with a higher buying level than is usual during this season of the year. The outlook is for another record breaking month for July. Urgent requests for additional shipments have made necessary increasing the company's July production schedule, which now calls for several thousand more cars and trucks than were produced in June.

Sales figures just given out by the company show that the total sales for June were 195,300 Ford cars and trucks. Of this number, 176,256 represent domestic sales, as compared with 170,547 cars and trucks sold in June a year ago.

Buying conditions also continue good in the high priced car market. Evidence of this appears in the sales of Lincoln cars during June, with deliveries to domestic customers totaling 892, an increase of 95 over June a year ago.

Illinois Registrations Drop 19 Per Cent During June

CHICAGO, July 11.—Registration statistics covering new passenger cars in Illinois during June reveal that there was a drop of 19 per cent in the total as compared with May. This, however, is not unusual for June, as many undoubtedly defer registration of new motor vehicles until July in order to take advantage of the semi-annual rate.

The sharpest decline was in the case of Fords with a loss of 26 per cent. Medium priced cars were off 20 per cent. The following table indicates the percentages of loss during June as against May:

	Loss
Fords	26 per cent
Low, excl. Fords	6 " "
Medium	20 " "
High	7 " "
Total	19 per cent

Following are the detailed figures for the first six months of 1925:

Low, excl.					
Month	Fords	Fords	Medium	High*	Total
Jan.	4,060	2,275	5,748	808	12,891
Feb.	3,424	1,718	4,977	612	10,731
March	5,714	2,729	6,416	784	15,643
April	9,010	3,755	8,801	861	22,427
May	8,751	3,644	8,014	899	21,308
June	6,473	3,400	6,383	828	17,084
Total	37,432	17,521	40,339	4,792	100,084

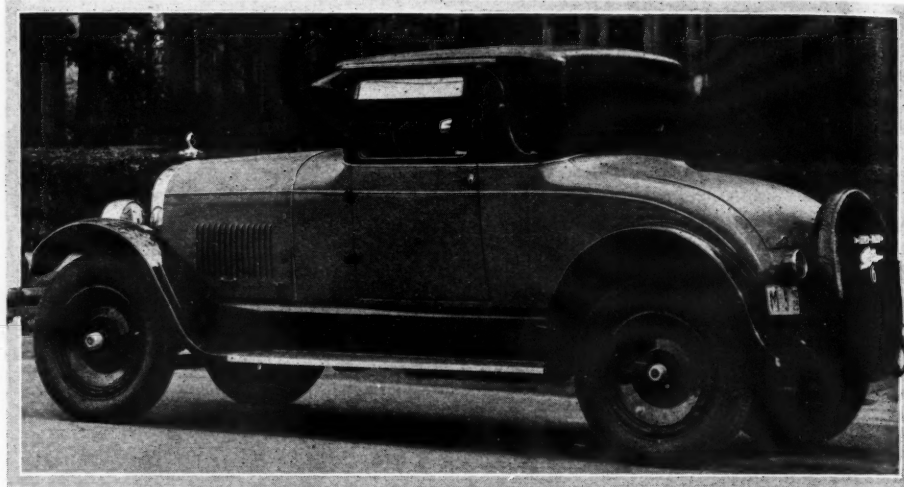
*Includes miscellaneous cars not named. These statistics were compiled from figures furnished to MOTOR AGE by Robinson's Advertising Service, Springfield, Ill.

Glove Finish Fabric Body on New Apperson Coupes

THE use of glove finish fabric over an expanded metal frame, said to possess many advantages over the conventional steel body style, is announced as the outstanding feature of two new coupe models now in production by the Apperson Automobile Company, Kokomo, Ind. The fabric bodies are being introduced in two series of sport coupes, one on the Straight-Away-Eight chassis and the other on the Super-Value Six. It is planned to extend their use to other models in the Apperson line. All bodies in the coupes will be gray and black, with a choice of bright stripes.

The new models are said to be impervious to weather conditions. Company officials declare that a damp cloth removes dust and grime and that the use of a good dressing at specified intervals maintains the original attractiveness and freshness.

The entire cab on the new coupes is of expanded metal, reinforced and cross-membered, with all joints heavily padded to protect the fabric. Top and quarters are of ash, covered with top material of contrasting color. The hood, made of sheet metal, is lacquered, fenders are enameled and radiator shell and lamps are nicked. Moulding of a contrasting color runs in a stream line from the radiator shell along the sides of the body



New Apperson six-cylinder coupe with glove finish fabric body. The hood is of metal finished in lacquer

to the rear, a strip of fabric being inserted in an aluminum-bound channel running parallel to the moulding.

Advantages claimed for the new body type are: Freedom from paint problems, longer wear and greater beauty under adverse conditions, very marked economy, simple and inexpensive replacement of

any section of the fabric; ease of cleaning; greater strength of body frame, with considerable reduction in weight; and complete elimination of body squeaks and rattles. Individual panels of the fabric can be replaced in event of accidents, it not being necessary to refinish the entire body.

Pay Dime a Name for Prospects

"What's in a name?" Shakespeare once asked. If he had addressed his question to the authorized Ford dealers

of Houston, Texas, the reply would have been:

"Ten cents each."

That is the price that the Houston Ford dealers offered to pay for the names of prospects. And had Shakespeare ap-

peared on the scene to inquire: "Where are you going to buy the names?"—the Houston Ford dealers would have answered: "Through the newspapers?" For after deciding to pay ten cents each for certain names they launched a newspaper advertising campaign in which their wants were alluringly set forth. The publicity campaign covered one week—with the result of a long list of names at ten cents each that made an excellent prospect reference.

In offering to buy names the Ford dealers made certain specifications. One condition was that the name should be accompanied with the person's address, another was that the person must not be an automobile owner and another was that his salary—or hers—should be at least \$125 a month. The dealers got the names and their salesmen did the rest.



Following the introduction of the Fisher Fast Freight chassis eight months ago, the Standard Motor Truck Company, Detroit, now announces a Fisher Bus having a 21 passenger pay-as-you-enter type body. Except for the mounting of 30 in. by 5 in. dual tires in place of 32 in. by 6 in. tires at the rear, the chassis is identical with the "Fast Freight" chassis and sells at the same price, namely, \$1295.

EISEMANN HEAD IN WEST

NEW YORK, July 11.—President Shaw of the Eisemann Magneto Corporation, is now on a trip to the Pacific Coast where he is making a thorough inspection of conditions. Mr. Shaw will call on the leading representatives and customers of his company, and return to his desk a month hence; stopping for a brief vacation in the Canadian Rockies.

Atlanta Dealers Sponsor Joint Advertising Contest

Accessory and Automotive Merchandisers Stage Novel Co-operative Campaign

ATLANTA, July 11.—A group of several automotive and accessory dealers in Atlanta recently staged a co-operative advertising contest, using a full page of space in one of the Atlanta daily newspapers.

The page was divided into several equal parts, and the first advertisement contained nothing except the photographs of an official of each of these companies taking part in the plan. For the best list of answers received from the public identifying these photographs—that is, giving the name of the man and the company—a prize of \$25 was given. The second best list received \$15, and the third and fourth best lists \$5 each.

At the end of the contest another full page advertisement was published including the photographs again, this time with the names of the men and of the companies.

The automotive firms taking part included the Automotive Sales & Service Co.; W. T. Adams, Ford service; the Rolls Battery Co.; the Meixel Tire Co.; the Nassau Lubricating Co.; the J. B. Anchors Auto Co.; the Lamar Welding Co.; the Rent-A-Car Co.; the Jack Wall Garage; the General Storage Battery Co.; the J. F. Clark Garage; the Camp Cylinder Grinding Co., and the Spring Street Garage Co.

Crowds Throng Showrooms To View New Chrysler Four

DETROIT, July 11.—Upwards of \$10,000,000 worth of Chrysler fours have been ordered by foreign distributors from the Chrysler Corporation here for the trade in their respective countries, since the introduction of the new model, according to J. E. Fields, vice president in charge of sales.

From the reception accorded the Chrysler four in this country and abroad, the big problem to be met, according to Mr. Fields, is to step up the production necessary to keep pace with the present demand.

In various parts of this country, the crowds which thronged the different showrooms to see the models were so great, according to reports received at the local office, as to require special details of police in some instances.

Perhaps the greatest reception the new model received was in this city. As the showrooms of the John H. Thompson Co., distributors for this district, more than 24,000 persons inspected the models during the first three days. At the end of that time, the company with the help of its city dealers had taken approximately 500 orders for the different four models.

Yellow Cab Joins General Motors

(Continued from Page 17)

Paul H. Geyser; vice-president and sales manager, P. L. Emmerson; secretary and general counsel, Edward N. D'Ancona; treasurer, C. H. Ritter.

Another manufacturing subsidiary is the Yellow Sleeve Valve Engine Works, of East Moline, Ill., whose officers are the same as those of the Yellow Coach.

Foreign manufacturing subsidiaries include the Canadian Yellow Cab Manufacturing Company, Ltd.; the Societe Francaise des Automobiles Yellow, of Paris; and two companies in Buenos Ayres.

Sales subsidiaries consist of the Yellow Manufacturing Sales Corporation with headquarters in Chicago, the New York Yellow Cab Sales Agency, Inc., and the Hertz Drivurself System, Inc. Of the latter the following are the officers: President, John Hertz; vice-president Paul H. Geyser; vice-president Irving B. Babcock; vice-president and general manager, P. L. Emmerson; secretary, Edward N. D'Ancona.

The finance subsidiary is the Yellow Manufacturing Acceptance Corporation of which John Hertz is president, and Alfred Ettlinger, Mr. Hertz' son-in-law, is vice-president and actuary.

The Omnibus Corporation of America, since its organization, has been the principal outlet for the product of the Yellow Coach Manufacturing Company. John Hertz is chairman of the board of the Omnibus Corporation, while John A. Ritchie, president of Yellow Coach, also is president of the Omnibus Corporation. The directorates are largely interlocking. The two principal operating branches of the Omnibus Corporation are the Chicago Motor Coach Company and the Fifth Avenue Coach Company of New York.

Duesenberg Reports Sales On Strong Upward Trend

Many New Dealerships Requested as Result of De Paolo's Victory At Indianapolis

INDIANAPOLIS, July 11.—Fred S. Duesenberg, president of Duesenberg Motors Corporation, reports that Duesenberg sales and distribution records are on the strong upward trend, with a number of new distributors and dealers to be announced shortly.

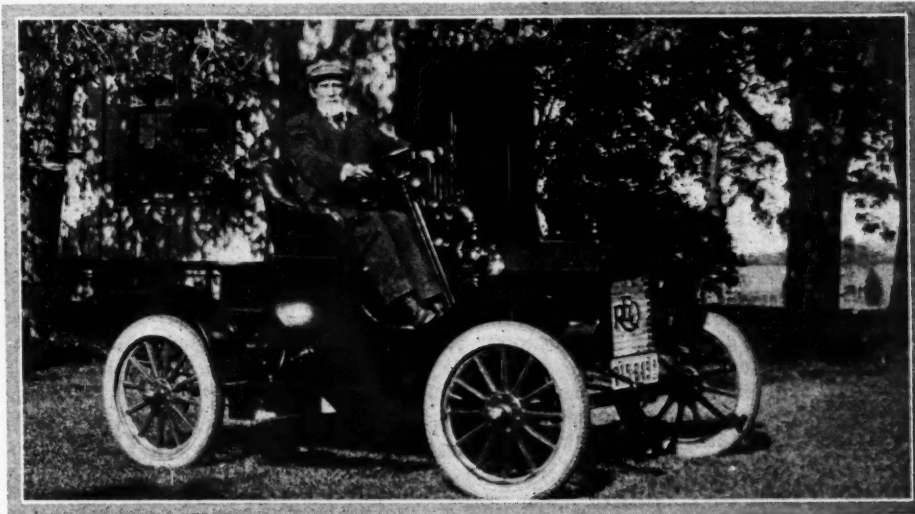
Many dealer applications have been received since the De Paolo Duesenberg ran away with the annual 500 mile festivities, and a number of veteran dealers report more demand for this car than at any time in the past. One phase of the new business that may startle some dealers is the large demand for open types of the sport and roadster models. One family in a Pennsylvania city has purchased three open cars that will be delivered this week, a trio of sales that may constitute a record for one family in the 1925 closed car season.

This trend toward open car types with tops that can be folded, while noticed in other Indiana factories, seems to have reached its peak in the Duesenberg plant which has always found a great demand for its sport, touring and roadster types.

STROMBERG OPENS IN LONDON

LONDON, July 11.—The Stromberg Motor Devices Co. of Chicago, manufacturers of Stromberg carbureters, has opened a direct factory branch in London to take care of the company's growing business in England. This branch also is introducing the Stromberg Super Shock Absorbers in this country.

Aged Reo Still Performing Well



Frank W. Bowren of Dousmann, Wis., still drives his 1908 Reo runabout on his trips from his farm to nearby towns. He says it has called for few repairs and such as have been necessary he has done himself. He affirms his love for his little red bus with the declaration that he would not trade it for the most up-to-date car on the market. It has created so much curiosity on his trips to town, that he has pasted a "history" of the car on the radiator, where all who will may read. The history announces that the car cost \$510 when new, and that it is paid for

De Palma Wins Opening Race at Rockingham Park

Eleven Start in 100-Mile Event Which Revived Interest in New England Speedways

SALEM, N. H., July 11.—Ralph De Palma won the 100-mile race here from a field of 11 starters in the opening of the new Rockingham Park Speedway.

The track is one and one-quarter miles long with banked turns and a surface of hard clay. There were more than 50,000 present to show that a revival of motor racing here would be welcomed.

De Palma won the pole in the time trials and the drivers were placed in rows of three by Starter Fred J. Wagner as follows: De Palma, Duray, Devore, first line; De Paolo, Shafer, Cooper, second row; Hartz, Elliott, Milton, third row; McDonough and Wonderlich, last. Fred Comer did not start.

On the first lap De Palma swung down the stretch at more than 90 miles an hour with Shafer and Duray close behind. De Paolo, who had the same trouble here as at Indianapolis in not getting started for the first flying lap, was fourth, pacing De Vore. The others began to trail, Milton dropping some distance behind. It was soon evident that De Palma had the race well in hand before 10 miles were finished, for he showed his same superior skill as a dirt track driver taking the turns.

A few times there were real thrills with the drivers fighting at the turns, refusing to give way. Before 25 miles passed Milton, McDonough, Wonderlich and Cooper were out.

De Palma lengthened his lead all the time and before the race ended he had lapped every driver, some of them several times. There was a real fight between Shafer and Duray for second place. Shafer held it for 25 miles then Duray passed him. Later Duray fell back to third but finally overtook Shafer. So they finished with De Palma a lap ahead of Duray; Shafer third, one and one-half miles behind De Palma; De Vore fourth, De Paolo fifth, Hartz sixth. De Paolo was three laps behind the winner. Elliott was flagged off with more than 10 miles to go.

De Palma's time was 1:18:7 3/5, Duray's 1:19:20, Shafer's 1:19:40 1/5. De Palma's victory was a popular one. The winner got \$4000, Duray \$2500, Shafer \$2000, De Vore \$1000, De Paolo \$500. They also got \$6000 appearance money. Jack Le Cain, veteran race driver, ran the meet and he expects to have another one here October 12, Columbus Day, a holiday.

Hudson-Essex to Expand Distribution in Northwest

SPOKANE, Wash., July 11.—Spokane is to become one of the largest distributing points on Hudson-Essex cars in the northwest, doing an annual business of \$2,500,000, under a program of expansion

Scientists Pronounce Crude Oil Airplane Engine Without Spark Plugs Practical in Principle

WASHINGTON, July 11.—The principle of the crude oil airplane engine without spark plugs has been found practicable and this revolutionary motor, sought by engineers since airplanes first flew, is now being completed by the National Advisory Committee for Aeronautics, it is announced here. The success comes as a dramatic climax to more than four years of experimentation by a distinguished group of scientists.

Although qualifying his announcement with typical scientific caution, G. W. Lewis, director of aeronautical research, advises that the committee constructing the engine "sees daylight ahead" after years of laborious study.

The new engine eliminates a wide variety of equipment which has contributed to the dangers of flying heavier than air craft, Mr. Lewis says.

Spark plugs and the present types of

ignition systems used in airplane and automobile engines are entirely done away with, being supplanted by heavy compression and cylinder heat. Instead of the accustomed spark igniting the gasoline vapor in the cylinder, the engine heat, combined with 3,000 pounds compression, causes an automatic explosion.

The same rough principle is known to motorists whose engines are full of carbon. "Pre-ignition," or an explosion ahead of the spark, caused by the glowing carbon, was the explanation given by the aeronautical engineers of the new system.

The greatest feature of the engine, however, according to Mr. Lewis, is the fact it uses ordinary crude oil. Should a plane crash, crude oil would not immediately ignite and envelop the pilot in flames before he recovered from the shock of the fall.

announced by Walter S. Evans, general manager of the John Doran Company, factory distributors of Hudson-Essex automobiles in eastern Washington, the panhandle of Idaho and western Montana.

The program, now under way, provides for the creation of 40 new Hudson-Essex agencies in this territory.

"We obtained 10 new dealers in the last week, and are now negotiating with several more in our territory," said Mr. Evans. "Before August we expect to have 100 dealers, who, we estimate, will sell an average of 175 cars a year. Our present dealers are selling about 1500 cars a year."

"The new dealers will be located in the smaller towns, where we have found excellent selling opportunities this spring and summer."

BADGER MFG. EXPANDS

WEST ALLIS, Wis., July 11.—The Badger Manufacturing Company, makers of automobile bumpers, will move into new quarters here shortly after having secured a 15-year lease on the former Avery Manufacturing company's plant. The new location will offer 95,000 square feet of floor space and production will be more than doubled with the increased capacity. The company now turns out 600 bumpers a day and additional machinery and equipment will be obtained to raise that figure to 1,500 bumpers per day, making it the largest bumper manufacturer in the country.

Instructor's Car Again Used Advantageously by Dealer

NEW ORLEANS, July 11.—Another Nash dealer organization is making use of an instructor's car, equipped with two driving wheels, one for the teacher and the other for the pupil. Employed in connection with an offer of free driving instruction the car is developing many

sales. The company is the Nash Mississippi Valley Motor Company, of New Orleans, of which F. E. Truett is general manager. Mr. Truett readily admits that he borrowed the double steering wheel idea from the Jack Neal company, Nash representatives in San Antonio, which also found it a big help in a business way. Following are some of Mr. Truett's observations concerning the New Orleans company's driving instruction with this novel car:

"With this instructor's car we interest persons whom we could never reach without it. The car makes a big appeal to women, especially to middle-aged or elderly women—and there are more men in the 'I can't learn to drive' class than you might imagine. Every week we find men who do not know how to drive cars well. Then there are almost unlimited advertising possibilities in such a car. Nothing in particular about selling is said as we let the person get the feel of the wheel and become thoroughly convinced that learning to drive is not such an impossible feat after all. Usually the lessons sell the person on the line of cars we handle."

"We have never put on a stunt, campaign or any unusual feature that has brought in as much money for the amount invested as has this and the best part is that it is more than a temporary attraction." The double-steering wheel arrangement was installed for \$250.

NEW LOCOMOBILE DEALERS

BRIDGEPORT, Conn., July 11.—Announcement is made by the Locomobile Company of America, Inc., of the appointment of the following dealers who will handle the new JR-8, deliveries of which are now being made:

H. S. Horwood Sales Company, Morristown, N. J.; Norton Motor Company, Edgemere, L. I.; Joseph Schaffer, Brooklyn, N. Y.; Kingsway Locomobile Company, Brooklyn, N. Y.

Finance Co. Condemns Plan of Small Initial Payments

Practice Reacts Unfavorably Upon Used Car Sales, Declares Hare and Chase

NEW YORK, July 11.—The trend toward unsound financing is rapidly bringing a new and serious issue before the dealer, says a statement issued by Hare & Chase, Inc., automobile finance company, which refers particularly to a "finance plan recently announced for a well known car, permitting down payments ranging from less than \$15 upward. In a city in which this plan was tried there was an immediate unfavorable reaction on the used car market, it is declared.

"The plan in question requires two endorsers," says the statement, "which the average buyer of limited means cannot command—but the effect of its announcement was to turn the minds of all prospective buyers of those cars, however limited their resources, towards the brand new article and completely away from that which had already seen service in other peoples' hands.

"The automobile man may as well convince himself, before false reasoning leads him into costly mistakes, that the proportion of our population which can afford both to buy and operate a motor car of current design in any price class will only increase very slowly over the present figure. The total number of users should increase as the population grows but their percentage is likely to gain little until the average margin between living costs and income becomes appreciably wider.

"Which being so it is obvious that the process of teasing the public with easier terms will only rearrange the present market without enlarging it. Let the low down payment mania become general and the used car carry-over from the active season would sink the average dealer before he could unload it on a public thus thoroughly under the influence of the new car ownership complex. For when you tell the buyer he can have a new car for a cash outlay equivalent to the cost of two theatre tickets or a suit of cloths you automatically close his mind to the used car appeal.

"Once you sell the market off the used car idea your total sales of both new and used may actually decrease. For if the logical used car buyer feels the new car urge too fiercely he may conclude not to buy at all until he can meet the new car terms, either by getting the needful endorsers or saving a higher percentage of cash.

"And if the endorsement requiring is waived—as it will be by weaker finance companies here and there—he will buy his new car for a pittance in cash and the used car will sit in the same old spot on the dealer's floor until it rots for all the public cares."

Cut Your Initials In This

KAHOKA, Mo., July 11.—Here's bad news for the prophets of the doom of Dobbin!

The city council last week authorized expenditure of \$1,450 for a site for a new hitching rack for horses and teams. The rack at the public square was demolished to make way for a paving project and the city dads felt it necessary to provide new accommodations.

Horace Dodge Buys 2,592 Curtiss "OX-5" Air Motors

DETROIT, July 11.—Horace Dodge, one of the directors of Dodge Brothers, has just completed purchase of 2,592 Curtiss airplane engines from the surplus stock of the air service. These engines which were paid for at the rate of \$80.26 apiece have been in storage for a considerable time and were originally intended for use in training planes of the "OX-5" series, 90 horsepower.

The "OX-5" engines have been used with success in high speed motor boats and it is understood Mr. Dodge is interested in the construction of speed boats. The possibility of their use in a new type of airplane could not be confirmed.

FORMER TRADESMAN DIES

WASHINGTON, July 11.—Michael J. Keane, a prominent attorney and at one time president of the Oldsmobile Company of Washington died here suddenly recently.

25 Years Ago In the Automobile Industry As Recorded In MOTOR AGE

(From MOTOR AGE of July 19, 1900)

Across Ohio in Fast Time

CLEVELAND, July 16.—A. S. Ingalls, a leading member of the Cleveland Automobile Club, and a son of President Ingalls of the Big Four Railway, made a flying trip across the state of Ohio Friday and Saturday, establishing a record which will probably stand for some time to come. He left Cleveland early Friday morning and reached Springfield late in the afternoon. He stayed there over night and made the remaining 80 miles into Cincinnati Saturday morning, reaching that city by noon. The distance covered was something over 250 miles and his actual running time was less than 20 hours.

Now Allowed in Munich

The Bavarian Government, according to a statement made by Consul Worman, has just set aside the city ordinance preventing the use of automobiles on the streets of Munich. This opens up one of the best German cities for American manufacturers of horseless vehicles of every sort because of the large class of

Popularity of Open Car Is Believed to Be Advancing

Sale of Windshield Wings Reaches Highest Total in June in History of Product

KOKOMO, Ind., July 11.—What seems to be a revival in the popularity of the open car is indicated by a very marked increase in the sales of windshield wings by the Kokomo Automotive Manufacturing Co., of this city, during the last two months. More than a year ago, when the trend toward closed cars was at its height, sales in the windshield wing division of the local concern dropped to a low figure, but, starting early last spring, wing sales started up with the result that during June of this year the total was the largest of any single month during the company's history.

"If it is not caused by increased popularity of open cars," said Neil T. Albright, secretary and general manager of the company, "it must be that the use of closed cars has caused motorists to want more protection, when they drive in open cars, than the ordinary touring car affords. I am inclined to believe that both of these factors have influenced the situation."

Albright also reports that mirror sales have been unusually good during the last few months, the total for June being 30 per cent more than any previous month. While distribution has been good in all sections of the country, he said, business is especially strong in the west. The plant has been running night and day for more than six weeks.

wealthy residents there. Munich is the third largest city in the German Empire.

Automobile for Customs Delivery

NEW YORK, July 16.—The New York Custom House has in use a locodelivery for the purpose of transferring invoices from the custom house to the public stores. This is one of the first of the delivery wagons now being built experimentally by the Locomobile Co. of America at its Bridgeport factory, with a view of making them a feature of the company's product next season. Collector George R. Bidwell, by the way, is an enthusiastic locomobiler and may be seen any day in the park and on the boulevards in his Stanhope.

German Show

BERLIN, July 2.—The automobile exhibition at Frankfort-on-the-Maine will be opened on July 14, Prince Friedrich Carl of Hesse, a brother-in-law of the German emperor, having undertaken to perform this ceremony. The Frankfort A. C. has entered 23 vehicles for competition.

June Business in Toledo Ahead of Sales in 1924

New Cars Do Not Move So Well As in May Which Set Several High Records

TOLEDO, O., July 11.—Sales of new cars in Toledo and surrounding territory during June were not up to the pace set in May when some lines set new high records but continued very much better than at this time last year.

Farm sales are continuing to hold up and dealers in the smaller towns are contributing much to the better business.

Accessory distributors report a fair run of business.

Replacement business is very good.

Tires are rather slow, business being spread out thin among many dealers.

Used car market continues very good with large cars moving slowly.

Finance is ample and money easy. Banks are advertising to place loans in the real estate field and this is an indication of the best of money conditions.

Dealers are expecting considerable lull in July and August but are preparing sales forces to take advantage of this period to push sales much more thoroughly than in the last few months.

Chevrolet Establishes Two More Zone Sales Branches

DETROIT, July 11.—Two more zone offices, one at Indianapolis and the other at Jacksonville, Fla., have been opened by the Chevrolet sales organization, making a total of 26 zone offices that are maintained throughout the United States.

Charles R. Lee will have charge of the Indianapolis zone office located between the three zone offices in adjoining states. No stock will be carried by this office.

The Jacksonville zone office will serve as the distribution center for Florida and Southern Georgia and will be in charge of Chester A. Smith. Plans are being drawn for a two-story building to provide reserve storage for cars and a \$50,000 stock of parts.

CHEVROLET AT HIGH POINT

JANESVILLE, Wis., July 11.—The July production schedule for the Chevrolet plant here calls for 6,100 cars. During the last week in June and the first week in July the company reached the high mark of an average of 300 cars per day, a mark which will be continued for July.

NEW AUBURN DEALERS

AUBURN, Ind., July 11.—New dealers which have been added to the organization of the Auburn Automobile Company follow:

Frank L. Smale, Riverside, Cal. Cole & Andrus Motor Sales, Tiffin, Conn. The Ruhlman Motor Car Co., Inc., Portsmouth, O. C. G. Crawford, Lexington, Ky. Joseph A. Bruno, (Stamford Motor Sales Co.), Greenwich, Conn.

"Tag Boy" Service Develops Volume Storage Business for Seattle Garage

SEATTLE, Wash., July 11.—When you cannot find a place to park in Seattle, just keep smiling until you see a negro boy in a white uniform, with the words "Tag Boy" in black letters on the pocket of his coat. Give him the S. O. S., and he will take your car, give you a receipt for it, park it in a fireproof garage until you telephone for it, and then deliver it to you, wherever and whenever you order it. The charge for all-day parking and this tag-boy service is 50 cents, but if you have your car washed and polished while you are shopping or busy in your office, the charge for storage is eliminated.

This new method of solving the parking problem is being applied by the T. A. G. Garage, owned and operated by James D. Esary, Jr. Arrangements are made with department stores and with

the caretakers of office buildings, to station tag-boys from 8 a. m. to 6 p. m. at the entrances. There they offer their service to shoppers and others. The service has packed the garage to capacity with profitable day storage, and has so worked to relieve the parking situation that Mr. Esary has been complimented by the traffic department of the city government.

The tag-boys carry cards with the name and address and telephone number of the garage and very brief description of the service rendered. They present these cards to every person they see seeking a parking space. In addition to this advertising, personal letters are written once a month to prominent business and professional men of the city, outlining the service and the guarantee of safety given for the car.

Optimism in Oakland Field Is Noted by G. M. President

PONTIAC, July 11.—Optimism in the future of the Oakland line was voiced recently by Alfred P. Sloan, Jr., president of the General Motors Corporation who with other members of the executive committee of the corporation were guests of Alfred R. Glancy, president and general manager of the Oakland Motor Car Company.

"During the course of a recent field investigation," Mr. Sloan said, "I found a general spirit of optimism among Oakland dealers which is one of the things that makes us expect much from the Oakland line in the near future."

Besides Mr. Sloan, the delegation included Charles S. Mott, vice-president of the General Motors Corporation, Lawrence P. Fisher, vice-president of the General Motors Corporation and president of the Cadillac Motor Car Company, and Charles T. Fisher of the Fisher Body Corporation.

Indianapolis Realtors Back Plan to Establish Airport

INDIANAPOLIS, July 11.—An airport for Indianapolis at any early date seems assured by the action of the Indianapolis Real Estate Board which is behind the movement to raise at least \$25,000 for the enterprise. Other clubs, commercial organizations and associations are to be enlisted in the campaign to raise money for the airport and to help plan for all the civic support the enterprise needs.

Though no proposed location for the landing field has been picked, the flat country lying on all sides of Indianapolis is said to be favorable for an adequate field at moderate costs. The only field here at present is the Shoen Field at Fort Benjamin Harrison which lies some ten miles northeast of the city. This is the army field where the reserve fly-

ing outfit has its headquarters, but army flyers say the field is not adequate or as smooth as it might be.

At one time the landing field at the Indianapolis Motor Speedway was extensively used by civilian and army flyers. There is both interurban and bus transportation to these fields with hard surfaced roads that would facilitate truck transportation of airplane freight or mail. The federal government has already advertised for bids for airmail from Chicago through Indianapolis to Memphis and the south.

DUESENBERG ADOPTS SCHEBLER

The Duesenberg Automobile & Motors Company of Indianapolis, twice successive winners of the Indianapolis Motor Speedway races, has just announced the adoption of the new Schebler Model "S" carburetor for all Duesenberg automobiles.

BALLOONS DEMANDED

DETROIT, July 3.—Since the middle of February when the Ford Motor Company announced that it would provide balloon tires as optional equipment on all new Ford cars until the end of May, the demand for these tires by Ford buyers has jumped 40 per cent. In February, Ford dealers estimated that out of the number of Ford cars produced, 20 per cent should be balloon equipped. Since then the demand for balloon tires among new Ford buyers has increased until at the end of May, 60 per cent of the cars turned out by the Ford company were balloon equipped to meet the demand.

PARIS HAS LARGEST SIGN

PARIS, June 26 (by mail).—The biggest luminous sign in the world is about to be erected on the Eiffel Tower, Paris, for the Citroen Automobile Company. It will be 69 feet at the base and will have a height of 655 feet. The total height of the Eiffel tower is 984 feet.

Ohio N. A. D. A. Meeting Will Stick to Problems of Dealer

Entire Program to Be Devoted to Discussions of Retail Sales and Expenses

ST. LOUIS, July 6.—There will be no discussion of tire vulcanizing or battery repairing at the meeting of Ohio automobile dealers at Cedar Point, Sandusky, O. August 6 and 7, according to an announcement of N. A. D. A. The entire program will be devoted to the car dealer and his profit problems.

Information on automobile sales, service and management will be given by leaders of the industry. The meeting will be under the auspices of the Ohio Council, N. A. D. A., the new unit instituted by N. A. D. A. to carry on the state work in Ohio.

It is estimated that 1500 automobile dealers, their sales managers and service managers, will attend. Everybody who can is being asked to drive to Cedar Point, as it is to be an automobile dealers' meeting from top to bottom.

An invitation has been extended to dealers to bring their families to enjoy an outing on the greatest beach resort in America.

At only seven cities in the United States have similar meetings been held. They were Atlantic City, Boston, Buffalo, Chicago, Milwaukee, San Francisco and Los Angeles. Eleven hundred automobile dealers, salesmen, sales managers and service managers attended the Los Angeles convention recently concluded.

Full discussions of balanced department sales and budgeted expenses will be held at the Ohio meeting.

Everybody attending the meeting will be housed at two hotels, Hotel Breakers and Hotel Cedars. If no preference is specified those attending will be assigned to one of the two hotels by the resort management.

Theory of Quality Rather Than Low Price Has Helped Build up This Business

CLEVELAND, O., July 11.—The Atlas Tire and Rubber Co., at 2111-19 Prospect avenue, at Cleveland, Ohio, which is rated as one of the oldest and largest independent tire companies in the Forest City, has in 16 years grown from an infant enterprise with retail sales of \$30,000 a year to a lusty concern with sales of tires which last year aggregated \$500,000.

J. M. Mendelson and O. P. Reed, the proprietors, assert that the emphasis that they have placed on the service and quality of their goods rather than price, has been the main factor in building up sales and good-will.

"If of two makes of tires that were offered to us, the one offered at \$12 would give 40 per cent more service than one quoted at \$10 we would not hesitate in buying the \$12 tire, for the owner of such a tire would get about 20 per cent more service for his money than had he purchased the lower priced tire from us," said Mr. Reed.

"We have found that although the original purchase price of a tire from us may be heavier than at some other places, yet if we are able to show better service in our tire, we usually retain the good-will and patronage of our customer.

NORTH EAST IN CANADA

ROCHESTER, N. Y., July 11.—The North East Electric Co. of Canada, Ltd., has begun the manufacture of North East starters, generators and ignition equipment, it is announced by officials of the company here. The Canadian concern will supply electrical equipment to car manufacturers of Canada who are using North East electrical equipment as standard.

NORTH CAROLINA PAYS \$10,117,589

CHARLOTTE, N. C., July 11.—The automotive trade and owners of motor vehicles paid \$10,117,589.51 into the state treasury of North Carolina for highway construction and maintenance in the fiscal year ended June 30, 1925, according to a statement received here from Revenue Commissioner Doughton, of Raleigh. The several sources of this income and the amounts of each were given as follows: License plates, \$4,710,234.87; gasoline tax, \$5,277,113.41; title fees paid by automobile manufacturers \$35,000; automobile owners' fees for title registration, \$130,239.23.

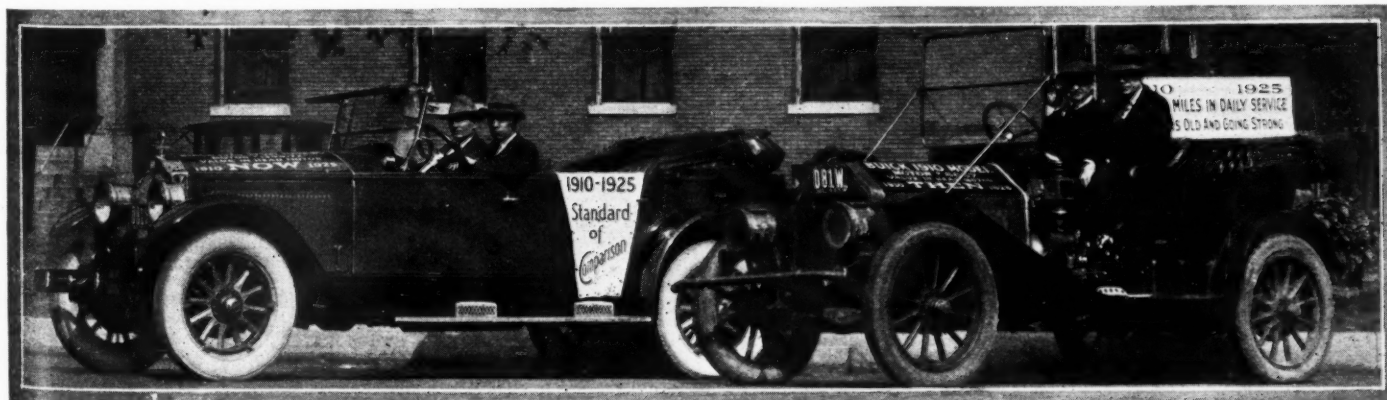
Deed for Maxwell-Chrysler Sale Is Recorded in Detroit

DETROIT, July 11.—The deed by which the Maxwell Motor Corporation transfers all of its property in Detroit, Highland Park, Ill., and Dayton, O., to the Chrysler Corporation has been recorded with the register of deeds of Wayne county.

The papers covering the transaction contained more than 6,000 words in booklet form totaling 14 pages in all. Revenue stamps on the deed amounted to \$5,480.50, which indicates the total value of the properties as around \$5,400,000.

In transferring its properties to the Chrysler corporation, the Maxwell corporation adds: "Together with all hereditaments and appurtenances of sale lands thereunto, belonging to or in any wise appertaining, and all plants, buildings, structures, fixtures, and erections, additions, betterments and improvements now erected on or attached to any of these premises above described are hereby conveyed and all equipment, machinery, tools, implements and appliances thereunto belonging, whether or not the same be affected to the freehold."

Old-Timer Goes Too When Good Will Tour Is Staged



Accompanying the 1925 Good Will Tour of the St. Louis Chamber of Commerce and making a great impression upon the forty-nine towns in western and northern Missouri visited on the tour were two Buicks, the one shown to the right being a 1910 model, with engine number 8657, and the one pictured at the left, a new Buick sport touring, 1925 model with engine number 1399172. The cars were owned by the Vesper-Buick Auto Co. of St. Louis, Buick distributors. Seated in the cars are, left to right, W. C. King, traveling representative, John F. Dawson, advertising manager, A. F. Stephens, shop superintendent, and F. H. Minshall, manager of sales promotion, all of Vesper-Buick



Along Automobile Row



EAST ST. LOUIS, Ill.—The Davies-Dougherty Company has been organized here and a garage has been opened at 707 Missouri avenue. Capital stock has been fixed at \$7,000. A number of makes of motor cars will be distributed and accessories will be handled.

NEWARK, Ohio—The A. P. Hess Co., has been chartered with an authorized capital of \$100,000 to deal at wholesale and retail in new and used autos and accessories and conduct a general auto garage.

PORTLAND, Ore.—W. S. Knudsen, president of Chevrolet Motor Company, R. H. Grant, vice-president, accompanied by F. N. Coates, regional manager, W. C. Williams, factory production manager, and W. I. Richmond, zone manager, are making a tour of the Pacific Coast visiting their distributors.

NEW ORLEANS—Milton W. Lusk, until recently New Orleans sales manager for the White Motor Co., and who was recently presented with the president's trophy, in honor of having achieved the highest percentage of White truck sales as per quota, in the company's contest, has been promoted to the position of district manager of the Baltimore district of the White Company.

CLEVELAND—The White Company has completed a new branch sales and servicing plant in Cincinnati and has new branch buildings under construction at Nashville and San Francisco. Additions to branch buildings also are being made at Washington and Dallas.

SEATTLE—Nute Motor Company, Hudson-Essex distributors in the Pacific Northwest has named the following dealers: Myers-Baird Motor Company, 4311 W. Alaska street, Seattle. Bucey Motor Co., Ketchikan, Alaska; Thos. J. McCaul, Juneau, Alaska; Anchorage Commercial Co., Anchorage, Alaska.

DETROIT—The Ayers Motor Sales Company has been appointed local distributors for Defiance trucks. Jules C. Ayers, head of the concern, has been identified with the truck line of the automotive industry when two cylinder trucks were in vogue.

MILWAUKEE—Announcement has been made in Milwaukee that the Shogren-Thomas Co. will distribute the Wills Sainte Claire in their district. The company is well known in the Milwaukee field and has been dealer for Peerless, a representation that will be continued.

HARTFORD, Conn.—Aaron G. Cohen, Inc., New England distributor of the Lexington has appointed Lawrence Sharkey of Meriden associate dealer in that territory.

LOS ANGELES—W. E. Lanphier, who has been connected with the retail department of the Howard Automobile Company of Los Angeles for many years, was recently appointed director of wholesale sales. He succeeds George Powell, who has been appointed retail sales manager.

ST. LOUIS—Walter Shaw Van has been appointed sales manager of the Benjamin Motor Co., Velie, Stutz and Cole distributor in the St. Louis territory.

DETROIT—W. M. Chamberlain, director of sales development of the Oakland Motor Car Co., has appointed M. L. Buck as field instructor succeeding G. A. Johnston who becomes retail sales manager of the Matheson-Oakland Co., Grand Rapids. Mr. Buck previous to joining Oakland was connected with the Dodge Bros. Inc., organization for six years.

ST. LOUIS—Ralph W. Page, who has been connected with automobile industry in St. Louis for the past ten years and lately as a member of the firm of Methudy and Page, Rollin distributors, retired from that firm recently and has been appointed director of retail sales of the Spaulding Motor Company, Inc., Flint distributor in the St. Louis district.

ROCK ISLAND, Ill.—Calvin Thompson of Monmouth, Ill., has purchased the garage of H. W. Kidder, Roseville, Ill. and will continue its Buick and Chevrolet agency.

MILWAUKEE—Organization of the Waltzer-Kern Co. to act as dealer for Chrysler fours and sixes in Milwaukee has been announced. Harry E. Jacobs is president of the new company but will not actively participate in its management. S. E. Kern is vice-president and E. J. Waltzer secretary.

DETROIT—S. E. Houston, advertising manager of Service Motors, Inc., has announced the appointment of E. A. Dennis as sales manager. Mr. Dennis has been connected with the Service corporation for the past three years. Practically all of his business experience has been in the automotive field.

ROCK ISLAND, Ill.—H. W. Neuman Machine Company, Davenport, Ia., established 17 years and specializing in the Jordan and Auburn car but dropping the latter two years ago, has resumed the Auburn agency.

SEATTLE, Wash.—Howell-Thompson Motor Co., Star distributors in King County have recently named the following Star dealers: Mettler-Holman Motor Co., Bremerton, Wash.; Sunset Garage, North Bend, Wash. and Valley Motor Co., Auburn, Wash.

CINCINNATI—The Point Garage Co. has been chartered with an authorized capital of \$5,000 to conduct a general auto livery and garage business.

DETROIT—The Frazee Motors, Inc., of Niles, Michigan has been chartered for \$25,000 to deal in motor vehicles. Faye Frazee and Carl H. Frazee of Niles and Charles Center Case, Jr., of Chicago are the incorporators.

CLEVELAND—The Wilson Avenue Auto Sales & Wrecking Co., has been incorporated by Philip Novitch, Max L. Lifshitz, Charles Udelesky, Ruth E. Davis and Israel Weinberg, with a \$1,000 capital to buy and sell used autos and parts and accessories.

HOUSTON, Tex.—Hurlburt-Still Electric Company will distribute the E. & J. type 20 headlights in the Houston territory, it is announced by the Edmunds & Jones Corporation of Detroit. The Detroit concern is manufacturing a lens which is said will comply fully with the Texas laws.

MILWAUKEE—The Tully-Hauber Garage has begun business at Wauwatosa, Wis., with capital stock of \$6,600. Ray D. Hauber, Richard Tully and William Tully are the incorporators of the company which will engage in the general garage business.

ST. LOUIS, Mo.—Steinger & Tuthill Hudson-Essex Co., has purchased the building at 3438 South Grand Boulevard formerly occupied by Hambuechen Paige-Jewett Co. and will have it remodeled and redecorated after which it will be used for the display of Hudson and Essex cars.

SPRINGFIELD, Ill.—The secretary of state has issued articles of incorporation to the Illinois Auto Appliance Company with office at 154 East Erie street, Chicago. The capital stock consists of 500 shares of no par value. The company will deal in and manufacture automobile accessories.

PORTLAND, Ore.—Union Motor Company, distributor of Cleveland cars in Portland, Ore., announces an enlargement of their business. Frank A. Koehler has been named sales manager and Fred W. Haines, manager of the used car department.

SPARTANBURG, S. C.—J. W. Brown, who has the Cadillac agency for this territory, has taken the agency for the Hudson and Essex cars recently given up by C. D. Entekin. Mr. Brown also handles Hupmobiles and Oaklands.

BUFFALO, N. Y.—Paige Sales Co. has given retail franchises to Leo Werner, St. Marys' Pa., and to the newly organized Paige-Jewett North Park Sales Co., for the North Park district, Buffalo, N. Y.

DETROIT—Formation of the Export Managers' Club composed of the various export managers of the different automobile manufacturers was effected recently with the election of W. E. Morrison, Paige-Detroit Motor Car Company export manager as president. It has 60 active members with applications yet to be acted upon.

BUNCETON, Mo.—George Hedgpeth, who for several years has been an employee of the local Ford Garage, has purchased a half interest in the Service Garage of which Clayton Eichelberger is the owner.

BUFFALO, N. Y.—The E. H. Baker Corporation, Buffalo, N. Y., distributors of Chrysler automobiles has given a retail franchise for the western part of the city to Joe Cook, until recently salesmanager of the Baker Corporation and to Frank Keefe, for many years one of its salesmen. Messrs Cook and Keefe have formed The Avenue Motor Corporation and taken a large building for sales and service.

CHICAGO—The Strom Ball Bearing Manufacturing Co., has appointed Frank H. Schubert as general manager. John Dlesh succeeds Mr. Schubert as works manager, and Lorenze Peterson continues as assistant works manager in charge of production.

SYRACUSE, N. Y.—T. G. Meachem, vice-president of the Creasalt Products Corporation, announces the appointment of Ernest V. Squier and Edward F. Clemett of Detroit, as representatives of Greasalt Products for the State of Michigan and the city of Toledo, Ohio.

BEAVERTON, Ore.—Otto Erickson & Company of Beaverton, known for years as a Ford dealer, has been granted the Star car sales franchise for Washington county. The organization has branches at Hillsboro and Forest Grove.

POCAHONTAS, Ark.—J. T. Davis & Son, Biggers, have opened an Overland and Willys-Knight auto agency here and in connection will conduct a sales and service station.

SAN ANTONIO, Tex.—F. Roy Robinson, for the last fourteen years in the tire business here, has joined the Jamison Auto Supply Company, where he will have charge of the tire department.

DETROIT—Headed by Thomas P. Henry, president of the A. A. A. and the Detroit Automobile Club, eleven members of the Detroit club attended the recent A. A. A. annual convention at Atlantic City as delegates from the local organization. Mr. Henry with William E. Metzger, director and former president of the club, also attended the meeting of the executive committee.

MADISON, Wis.—Completion of the new \$110,000 home of the Jacobsen Auto Co., gives this city one of the most beautiful and at the same time practical and efficient automobile dealer homes in Wisconsin. The show rooms, with 2,800 square feet of floor space are the largest in the city. Cadillac, Hudson, Essex and Jordan cars are handled by the company on a dealer basis.

DETROIT—E. Reinhardt, identified with the servicing of Oakland cars for the last 11 years, has been appointed manager of the service station of the Richard-Oakland Co., at 440 Burroughs avenue, G. A. Richards, president has just announced.

ST. LOUIS—Fred W. Gatermann, president of the South Side Nash Co., has bought controlling interest in the concern through his purchase of the holdings of William J. Wolf, vice-president and treasurer of the company. Mr. Wolf has retired from the company.

DALLAS, Tex.—William Morris, for the last seven years Hudson-Essex dealer and distributor, has taken over the Chrysler lines in Dallas, it was announced this week. The Hudson-Essex lines were taken over by the Furguson Motors Company, July 1.

With the Associations

National Inventory Planned

NEW YORK, July 11.—Jobbers and rubber and tire manufacturers express keen interest in a questionnaire now being conducted by the National Tire Dealers' Association, which will show the condition of dealers' tire stocks as of June 30.

On April 27 the rubber division of the Bureau of Foreign and Domestic Commerce issued a report showing dealers' tire and inner tube stocks on hand as of April 1, 1925. George J. Burger, president, believes that the association's questionnaire will be of particular value in that it will offer a comparison between stocks on hand April 1 and stocks on hand June 30.

Thus the questionnaire will show what effect the rising prices of tires and tubes, during the April 1-June 30 period, had upon dealers' stocks. In addition, Mr. Burger says that about 80 per cent of the dealers reporting in the government's survey carried not more than 100 casings in stock, whereas the association questionnaire covers between 1,000 and 1,500 of its members who, on the average, carry stocks of from 300 to 400 tires.

Mr. Burger adds that the questionnaire will show whether the sizeable dealer and the consumer, in anticipation of the various boosts in prices, has been buying stocks in advance. Mr. Burger's information is to the effect that this has not been the case.

He points out that the answers to the questionnaire, which are requested by August 1, will be of special interest to jobbers, indicating the amount of dealer stocks on hand and thus gauging the jobbers' orders to the manufacturer.

Mr. Burger does not expect the questionnaire to show that dealers' stocks have been appreciably reduced between April 1 and June 30. Each dealer is asked to state the number of tires, tubes and solid and cushion tires he had on hand as of June 30; whether purchases and sales increased during the first six months of 1925 over the same period in 1924; whether general business conditions in June were good, bad or fair; whether consumers are buying in advance of their requirements; whether dealers are securing advance prices for tires and tubes; and whether the dealers have obtained a new number of the association for 1925.

Louisville Moves Headquarters

LOUISVILLE, July 11.—Headquarters of the Louisville Automobile Dealers Association have been moved from 614 South Fifth street to 610 South Third street, in the Elks Club building. The move was made in order to place the association offices in a location more convenient to the automobile dealers of this city.

Will Close Saturday Afternoons

ST. LOUIS, July 11.—What does it profit an automobile dealer or distributor to keep his repair department open on Saturday afternoons? Very little or nothing, according to a recent survey made by members of the service managers' bureau of the St. Louis Automobile Dealers' Association.

At a recent meeting it was determined to have the members survey and report on the work done in their shops on Saturday afternoons. At a meeting held last week the results of this survey reported and all showed that Saturday afternoon was unprofitable in their shops, in some instances not enough being taken in to pay the wages of the men on duty. Therefore a resolution was adopted stating it was the belief of service managers that no loss of money would result to automobile establishments by closing their repair shops at noon Saturday and having them remain closed until Monday morning. The secretary of the bureau was told to bring the resolution to the attention of the heads of the respective firms represented by the service managers.

The officers of the bureau who were elected when it was organized to serve three months were all re-elected to serve nine more months for a complete year's term. They are J. O. Lowell, service manager Vesper-Buick Auto Co., Chairman; W. G. Miller, service manager, Stewart-Warner Products Co., vice-chairman, and Robert E. Lee, manager St. Louis Automobile Dealers' Association, secretary.

G. H. Brown, manager of the Gabriel Snubber business in St. Louis addressed the bureau on the servicing of Gabriel Snubbers and James Jambor, service manager of the United Motors Service Corporation, spoke on ignition troubles.

Johnson Is Re-Elected

LOUISVILLE, July 11.—Alex Johnson, president of the Louisville Automobile Club was re-elected a director of the A. A. at its recent convention at Atlantic City. Joseph M. Emmert, another Louisville delegate, was also elected a director. The A. A. A. indorsed the resolution of the Louisville club proposing that the federal government take over Mammoth Cave as a national park.

Oakland and Buick Win

ROCHESTER, N. Y., July 11.—The opening games of the Rochester Automobile Dealers' Association were won by the Oakland and Buick nines, the Oakland team defeating the Oldsmobile outfit, 18 to 12, and the Buick combination winning from the Hudson-Essex team, 14 to 8. The teams are composed of workers at the agencies.

Service Men Organize

INDIANAPOLIS, July 11.—All Indiana section of the Automotive Electric Service Association was organized here recently by Adolph Wagner of the H. T. Electric Company. The new section of the national association will be known as the Hoosier section.

Representatives of 30 authorized electrical service stations were present and after completion of the business session, a general discussion of topics of local interest rounded out an enthusiastic meeting.

The following were the elected officers:

Chairman, C. E. Smith of Indianapolis, vice chairman, H. W. Morris of Paris, Ill., secretary, A. A. Burgman of Logansport, Ind., and treasurer, G. E. Sligh of Evansville, Ill.

The next meeting is scheduled for September 25 at which time a large increase in membership is expected.

New Boulevard Opened

CHICAGO, July 15.—South Park Way, another new boulevard connecting link between Chicago's great South Side and the loop, was opened to traffic today. The Chicago Automobile Trade Association was represented in force with thousands of automobiles and trucks taking part in the floral parade that marked the opening of the new driveway.

Nearly every dealer in the city was present, heading a unit of from 10 to 50 cars, driven by his customers. All the cars and trucks were filled with flowers. Prizes were distributed for the best decorated cars, the best unit showing and many similar combinations.

Following the parade a banquet was held at the Congress Hotel.

Form Credit Association

LOUISVILLE, July 11.—Tire and accessory dealers of Louisville have lost approximately \$150,000 from bad credit accounts during the past six months, according to a report presented at a recent meeting of the Louisville Tire and Accessories Association. Members of the recently formed association adopted a plan to exchange credit reports through a central office in an effort to eliminate bad credit risks. Officers of the association are William Mohlenkamp, president; R. D. Heman, vice-president; R. E. Dean, secretary and Ben Schulman, treasurer.

Electric Association to Meet

CLEVELAND, July 11.—The general meeting of the Automotive Electric Association will be held September 14 to 17 at Eaglesmere Park, Pa., according to an announcement by Earl Turner, manager.

Alabama Trade Sets Stage For Tuscaloosa Convention

Program Practically Completed for State Organization's Annual Meeting July 20-21

BIRMINGHAM, Ala., July 1.—The program for the meeting of the Alabama Automotive Trades Association is practically completed. The meeting will be held at the Chamber of Commerce in Tuscaloosa July 20-21 with E. W. Brownell, president, holding the gavel. The meeting bids fair to be the largest the association has ever had, according to Jim Farley, secretary, who has charge of the arrangements.

The following tentative program has been arranged for the meeting.

July 20

Registration of members and visitors.
Formal opening of the convention.
Address of welcome by Jim Robertson of Tuscaloosa, president of the Tuscaloosa Association.
Response by M. K. Johnson of Montgomery.
President's address.
Report of secretary.
Report of committees.
Unfinished business.
New business.

Adjourn for Lunch

Address by Arthur Mogge.
Address by Sidney J. Bowie of Birmingham.
Address by Henry B. Mathews.
Address by Congressman Kister Hill on "Legislative Needs."
Address and Short Talks by other speakers.

July 21

Boat trip to Lock 17 on the Warrior River. Luncheon will be served on the boat and the return trip made in the afternoon.

Mississippi Town Discards Street Cars for Bus Lines

NEW ORLEANS, July 11.—Hattiesburg, Miss. taxpayers have approved the substitution of motorbuses for their electric street car system, official tabulations of the recent election show.

The Hattiesburg Traction Company recently purchased by the Mississippi Power Company already had two motor buses in operation at Hattiesburg, and as soon as additional ones already shipped arrive, the electric street cars will be abandoned.

Hattiesburg is the first city in Mississippi to give up its electric railways for motor bus transportation. Meridian, Laurel, Gulfport and other cities are expected this summer to consider adopting buses for transportation.

NEW GARDNER DEALERS

ST. LOUIS, July 11.—New dealers added by the Gardner Motor Co., Inc., include:

C. E. Gass, West View, Pa.; N. A. Smith, New Castle, Pa.; M. A. Patton, Marietta, Pa.; Kline Motor Co., Colorado Springs, Colo.; Jos. S. Ronnow, Las Vegas, Nev.; T. H. Stuart, Sapulpa, Okla.

Coming Motor Events

Automobile Shows

- Boston Oct. 10-17
World's Rubber and Tropical Exposition.
- Dallas, Tex. Oct. 10-25
Annual Automobile Show, State Fair Automobile Building, under the auspices of the Dallas Automotive Trade Association. J. W. Connell, manager.
- De Pere, Wis. Aug. 31-Sept. 21
Annual Automobile Show under the auspices of the Automobile Division of the Green Bay Association of Commerce.
- Fresno, Cal. Sept. 28-Oct. 3
Fresno Motor Car Dealers Association. Fifteenth Annual Show in connection with Fresno District Fair.
- Grand Rapids, Mich. Sept. 7-12
Grand Rapids Automobile Dealers Association, Seventh Annual Show in connection with West Michigan Fair, Wm. T. Morrissey, manager.
- Oklahoma City, Okla. Sept. 26-Oct. 3
Annual State Fair and Exposition. Passenger cars and accessories.
- Sacramento, Cal. Sept. 5-13
Automobile Exhibits in Diamond Jubilee State Fair.
- Shreveport, La. Oct. 24-Nov. 8
Twentieth Annual State Fair showing passenger cars, trucks and tractors.
- New York Nov. 15-21
Twenty-first Annual Automobile Salon.
- Wheeling, W. Va. Sept. 7-12
Wheeling Automobile Dealers Association, Eleventh Annual State Fair, Exposition Building.
- White River Junction, Vt. Sept. 15-18
Nineteenth Annual Twin State Fair. Passenger cars, trucks and accessories. F. L. Davis, manager.
- Chicago Jan. 30-Feb. 6
Twenty-sixth Annual National Automobile Show and Eleventh Annual Automobile Salon.
- Danbury, Conn. Oct. 5-10
Eighth annual fair, Danbury Fair Auto Building, under direction of Danbury Agricultural Society, passenger cars, trucks, tractors, accessories, etc.. H. Lage, manager.
- Boston Oct. 10-17
World's Rubber and Tropical Exposition, Mechanics Hall, Chester I. Campbell, manager.
- Chicago Sept. 28-Oct. 3
Fourteenth annual Safety Congress and Exhibit, Rainbow Room, Hotel Winton, under direction of National Safety Council, A. M. Smith, business manager.
- Salt Lake City Oct. 1-7
Third annual Automobile Show and forty-seventh annual State Fair in Coliseum Building, Wm. D. Sutton, supervisor of Automobile Show.

Foreign Shows

- Berlin, Germany Nov. 26-Dec. 6
Annual Automobile Show in the Kaiserdamm.
- Buenos Aires, Argentina Oct. 3-13
Pan-American Road Congress.
- London, England Oct. 8-17
Olympia Passenger Car Show.
- London, England Oct. 29-Nov. 7
Annual Truck Show.

Races

- Altoona, Pa. Sept. 7
- Charlotte, N. C. Oct. 24
- Fresno, Cal. Sept. 30
- Laurel, Md. Oct. 10
A. A. A. Race, Baltimore-Washington Speedway.
- Los Angeles, Cal. Nov. 26
- Monza, Italy Sept. 6
Italian Grand Prix Race.
- Paris Montlhery track July 26
French Grand Prix.
- Syracuse, N. Y. Sept. 19
- Salem, N. H. Oct. 12

Conventions

- Buenos Aires, Argentina Oct. 3-13
Pan-American Road Congress.
- Cleveland Sept. 14-19
Annual Convention and Exposition of American Society for Steel Treating.
- Cleveland Sept. 15-16
S. A. E. production meeting and exhibition.
- Des Moines, Ia. Nov. 12-13
Automotive Merchants' Association Convention.
- Everett, Wash. Aug. 3-4
Annual state convention Washington Automotive Trades Association.
- Montreal, Que. Oct. 7-10
Fall convention of the Motor and Accessory Manufacturers Association.
- Philadelphia September
S. A. E. Automotive Transportation meeting.
- Pittsburgh, Pa. Oct. 12-14
Pennsylvania Automotive Association Convention.
- St. Louis Nov. 17-19
Annual Convention of National Tire Dealers' Association.
- Tuscaloosa, Ala. July 20-21
Midsummer meeting of the Alabama Automotive Trades Association.

BUMPER GOES BY AIR

WAUKEGAN, Ill., July 11.—Recently a rush order for Biflex fender guards was received by the Biflex Corporation, Waukegan, and in order to give quick service, a pair was carried from Chicago to Dearborn, Mich., via the Ford Air Service.

NEW PEERLESS DEALERS

CLEVELAND, O., July 11.—Following are new dealers appointed by the Peerless Motor Car Company of Cleveland: Joplin-Peerless Motor Company of Joplin, Mo.; A. C. Gielow Motor Sales Co. of Michigan City, Ind.

A. A. A. Will Continue Bus Division, President Asserts

Thomas P. Henry Announces Campaign to Enroll Members Will Open at Once

WASHINGTON, July 11.—The American Automobile Association will continue its bus division, according to President Thomas P. Henry, despite the fact that a complete basis for affiliation could not be worked out at the recent Atlantic City meeting with a committee representing the newly formed National Bus Association. Already representatives of several state bus associations have asked the A. A. A. to continue its bus work, officials of the latter association stayed three days after the Atlantic City meeting, and an immediate campaign will be started to enroll members.

"It is vital that the owners of all types of motor vehicles should stand together and work out their common problems, and we will throw our entire organization experience into a program to effect such a condition not only in the public interest, but in the interest of all motor vehicle operators," said President Henry when asked to comment upon the Atlantic City meeting.

"The difficulties we faced at that meeting were perfectly understandable," he said, "when one considers that the independent bus operators have had such hard fights for recognition, and against drastic laws and taxation that they become unduly suspicious and see in simple organizing principles, a deeply laid plot to control their desires and policies. We are seeing light upon this new and intricate transportation problem, and while as an organization, we have been perfectly capable of maintaining our own position for 23 years, we feel that the interests of bus and truck operators and owners are so identical in principle that one great Association ought to represent the varied interests, with all groups making up the association having adequate representation upon the governing board.

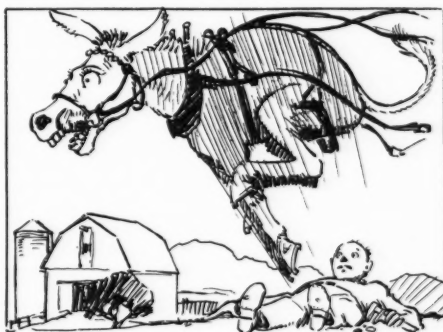
"There are bound to be differences of opinion, but it will be far better for all of us if we settle those differences within our own circle and then present a united front and a constructive program."

WISCONSIN CARS INCREASE

MILWAUKEE, July 11.—Figures on motor vehicle registration in Wisconsin as of June 30 indicate a substantial gain over the registration for 1924 at the same time. There was an increase of a half million dollars in the fees received for registration this year over last, the respective amounts being \$7,190,449 for this year and \$6,712,637 for last year. There were 538,001 vehicles registered in Wisconsin on June 30 this year is compared with 473,913 last year. Most of the funds derived from license fees will be used in the building and maintenance of state highways.

SQUEEKS and RATTLES

THEN IT WORKED



"What became of that hired hand you got from the city?"

"Aw, he used to be a chauffeur, and the doggoned idiot crawled under a mule to see why it wouldn't go."—Santa Barbara News.

It Is

Man, in speeding car, to driver, Say, this is a pretty town, wasn't it?

—Harvard Lampoon.

Metropolis

Mose—"Say, Eph, dis town 'Private' must be some city."

Eph—"How come, Boy?"

Mose—"Cause all dese yere Alabama cars is from dere."

—E. E. Rains.

IN REVERSE

She: He says he has had his car for three years and hasn't been in a wreck.

He: He means he has been in that wreck for three years and hasn't had a car.

—Life.

PAGEANT OF PROGRESS

1895: "Looky, automobile!"

1925: "Looky, horse!"

1955: "Looky, pedestrian!"

—Life.

June Marmon Sales Double Those of Same Month, 1924

INDIANAPOLIS, July 11.—Final check-up by Nordycke & Marmon Company sales department shows that retail sales reported by the distributors and dealers for June are more than double the sales made in June 1924. Fifteen per cent more Marmons were sold and delivered than in May, and summer sales have been in excess of factory shipments in spite of the fact that factory shipment for June, 1925, were three times as large as those of the same month last year.

The record of unfilled orders on hand July 1 will keep the plant at capacity during July, while for some models in high demand there are sufficient unfilled orders on hand to assure production all summer.

A JOLLY WHEEZE

"For sale, Studebaker, to seat six, no room for same."
It would have been funnier not to say anything until afterwards.

—London Daily News.

Fable—Once upon a time a radio fan described his set coherently.

—Toronto Telegram.

Padded Cell

Advertisement in the Rosewell (New Mexico) Evening News:

"For Sale—Twelve fresh milk cows, twelve calves and one hundred lambs. Scientifically adjusted. Terms to right party, but no last year's bird nests need apply."

—American Legion Weekly.

A USED CAR

Father (with new car): Can't understand what's wrong. It went all right when I drove it down yesterday.

Bobbie (with vivid memories of his own toys): Yes, but yesterday it was new, Daddy.

—London Opinion.

WATERED STOCKS



Customer—I see you are selling canoes now.

Accessory dealer—Yes, that serves two purposes. It works in well with the tourist trade and gives me a line with a good turnover.

These records show that the prospects for late summer Marmon sales and production were never better, and that the next quarter may equal the pace established during the first six months of the year when the total volume of business exceeded the total 1924 volume.

DURANT PRICES REDUCED

LANSING, Mich., July 11.—Effective July 10 prices of Durant cars were reduced as follows: Chassis from \$720 to \$710; Standard Touring from \$830 to \$810; Standard Coupe from \$1160 to \$1090; Standard Sedan from \$1190 to \$1150; Special Touring from \$950 to \$930; Special Coupe from \$1235 to \$1160; Special Sedan from \$1310 to \$1280.

Balloon tires were made standard equipment on all Durant models. All prices quoted above are f. o. b. Lansing, Mich.

Prices and Weights of Current Passenger Car Models

SHIP.				SHIP.				SHIP.				SHIP.				
WT.	PASS.	BODY STYLE.	PRICE	WT.	PASS.	BODY STYLE.	PRICE	WT.	PASS.	BODY STYLE.	PRICE	WT.	PASS.	BODY STYLE.	PRICE	
AJAX				CHANDLER (Cont'd)				DORRIS "6-80"				HAYNES "60"				
2210	5-p	Touring	\$865	3309	5-p	Chummy Sedan	\$2,045	4120	4-p	Pasadena Tour.	\$4,150	3295	5-p	Touring	\$1,600	
2410	5-p	Sedan	995	3469	5-p	Met. Sedan	2,195	4115	7-p	Touring	4,150	3650	5-p	Brougham	2,200	
ANDERSON "41"				3428	5-p	Sedan 4 d.	1,995	4193	4-p	Coupe	4,985	3765	5-p	Sedan	2,800	
2650	5-p	Touring	\$1,195	3521	7-p	Sedan	2,195	4200	5-p	Sedan	5,550	HERTZ D-1				
2675	4-p	Sp. Touring	1,445	3598	7-p	Limousine	3,095	4310	7-p	Sedan	5,800	3360	5-p	Sedan	\$1,695	
2925	2-p	Coupe	1,425	CHEVROLET				DUESENBERG				HUDSON "Super Six"				
2875	5-p	Sedan	1,695	"Superior" (Series K)				Straight "8"				3425	7-p	Phaeton	\$1,250	
2925	5-p	Sp. Sedan	1,895	1755	2-p	Roadster	\$525	3920	3-p	Roadster	†	3450	5-p	Coach	1,250	
"50"				1870	5-p	Touring	525	3700	5-p	Phaeton	\$6,650	3425	4-p	Brougham 4 d.	1,595	
2975	7-p	Touring	1,595	2015	2-p	Utility Coupe	715	3920	7-p	Phaeton	†	3675	7-p	Sedan	1,795	
3200	7-p	Sedan	1,945	2110	5-p	Coach	735	3980	4-p	Sp. Phaeton	†	HUPMOBILE "R"				
APPERSON "6"				2220	5-p	Sedan	825	4500	5-p	Sedan	†	2595	2-p	Roadster	\$1,225	
8100	5-p	Phaeton	\$1,575	CHRYSLER "Four"				†Manufacturers do not quote list prices.				2705	5-p	Touring	1,225	
8100	5-p	Sp. Phaeton	1,650	(109 in. W. B.)				DU PONT "D"				2760	2-p	Coupe	1,350	
8145	5-p	Coupe	2,050	2390	5-p	Touring	\$895	3300	2-p	Roadster	\$2,600	2875	5-p	Club Sedan	1,375	
8470	5-p	Sp. Sedan	2,100	2440	2-p	Club Coupe	995	3550	5-p	Touring	2,600	"E"				
8470	5-p	Brougham	2,050	2590	5-p	Coach	1,045	3800	7-p	Touring	2,750	3050	2-p	Roadster	1,795	
"ST 8"				2680	5-p	Std. Sedan	1,095	3550	5-p	Touring Sedan	3,400	3270	4-p	Roadster	1,895	
8100	5-p	Sp. Phaeton	1,995	"Six" (112½ in. W. B.)				3800	7-p	Touring	2,750	3135	5-p	Touring	1,795	
8145	5-p	Coupe	2,450	2805	4-p	Roadster	\$1,625	3550	5-p	Touring	2,600	3295	2-p	Coupe	2,095	
8470	5-p	Brougham	2,450	2730	5-p	Touring	1,395	DURANT A-22				3295	4-p	Coupe	2,095	
8470	5-p	Sedan	2,595	2785	5-p	Phaeton	1,495	2225	2-p	Sp. Roadster	900	3410	5-p	Sedan	2,195	
AUBURN				2895	5-p	Coach	1,545	2225	5-p	Touring	810	JEWETT "23-25"				
8100	5-p	Touring	\$795	2935	4-p	Coupe	1,895	2395	4-p	Coupe	1,090	3025	4-p	Roadster	\$1,630	
8470	5-p	Brougham	1,495	2995	5-p	Brougham	1,965	2505	5-p	Spec. Coupe	1,160	2835	5-p	Touring	1,205	
8470	5-p	Sedan	1,795	3060	5-p	Sedan	1,825	2430	5-p	Spec. Sedan	1,150	3015	5-p	De Luxe Touring	1,320	
"8-88"				3085	5-p	Imperial Sedan	2,065	5-p	Spec. Coach	1,280	2835	2-p	Bus. Coupe	1,340		
8100	5-p	Roadster	1,975	3090	5-p	Crown Sedan	2,195	2430	5-p	Coach	1,050	3025	5-p	Sedan	1,580	
8470	5-p	Sport Roadster	1,975	(118½ in. W. B.)				5-p	Spec. Coach	1,100	3305	5-p	De Luxe Sedan	1,780		
8470	5-p	Club Roadster	2,075	3225	5-p	Town Car	3,725	ELCAR "4-55"				3000	5-p	Coach	1,260	
8470	5-p	Sport Brougham	2,250	CLEVELAND "31"				5-p	Touring	\$1,095	JORDAN					
8470	5-p	Sedan	2,350	2325	5-p	Touring	\$ 895	5-p	Coach	1,195	Series "A"					
BARLEY "6" 6-50				2580	5-p	Sedan	1,195	5-p	Sedan	1,395	3330	2-p	Playboy Road.	\$2,575		
2750	5-p	Touring	\$1,395	"43"				5-p	Touring	1,295	3340	5-p	Touring	2,575		
2800	5-p	Sp. Touring	1,495	2750	5-p	Touring	1,095	5-p	Coach	1,395	3450	3-p	Friendly "3"	2,875		
3100	5-p	Sedan	1,850	2810	5-p	Touring De Luxe	1,195	5-p	Sedan	1,595	3625	5-p	Brougham	2,875		
3150	5-p	Sp. Sedan	2,250	2910	5-p	Sp. Touring	1,295	5-p	Touring	1,295	3520	4-p	Victoria	2,775		
BUICK "Standard"				3000	5-p	Coach	1,295	5-p	Coach	1,395	3525	5-p	Sedan	2,975		
2750	2-p	Roadster	\$1,150	3040	5-p	Sedan	1,495	5-p	Roadster	2,315	3470	7-p	Sedan	3,325		
2920	5-p	Touring	1,175	3190	5-p	Sedan De Luxe	1,695	3700	5-p	Sp. Touring	2,165	3800	7-p	Suburban Sedan	3,375	
2960	2-p	Coupe	1,375	3190	5-p	Sport Sedan	1,725	7-p	Sp. Touring	2,265	KISSEL "55"					
3075	4-p	Coupe	1,565	2990	5-p	Brougham	1,545	3000	3-p	Coupe Roadster	2,315	3130	2-p	Speedster	\$1,895	
3185	5-p	Dbl. Srv. Sedan	1,475	COLE "MASTER"				4050	5-p	Sedan	2,265	2980	5-p	Sp'dster De Luxe	2,185	
3245	5-p	Sedan	1,665	3675	4-p	Volante Touring	\$2,325	4050	7-p	Sedan	2,765	4-p	Speedster	1,995		
3050	5-p	Coach	1,295	3795	7-p	West. Touring	2,325	4000	5-p	Brougham	2,865	4-p	Sp'dster De Luxe	2,285		
"Master"				3675	4-p	Aero-Vol. Tour.	2,475	ESSEX				3530	2-p	Enc. Speedster	2,285	
(120 in. W. B.)				4055	5-p	Brouette Sedan	3,225	2130	5-p	Touring	\$850	2-p	Enc. Sp'd'r DeL.	2,785		
3285	2-p	Roadster	1,365	4000	7-p	Royal Sedan	3,225	2395	5-p	Coach	850	3190	4-p	Tourster	1,895	
3465	5-p	Touring	1,395	4100	7-p	Royal Limousine	3,325	FLINT "55"				4-p	Tourster De L.	2,085		
3850	5-p	Sedan	2,225	CUNNINGHAM				3325	4-p	Sport Roadster	\$1,950	2980	5-p	Phaeton	1,685	
3560	5-p	Coach	1,495	4600	7-p	Touring	\$6,300	3245	5-p	Touring	1,595	3170	5-p	Phaeton De L.	1,885	
(128 in. W. B.)				4500	4-p	Sp. Touring	5,800	3310	4-p	Sp. Touring	2,050	7-p	Touring	1,785		
3485	3-p	Sp. Roadster	1,750	4700	4-p	Coupe	7,150	3245	4-p	Coupe	2,195	7-p	Touring De L.	1,985		
3550	5-p	Sp. Touring	1,800	5000	6-p	Limousine	7,650	3595	5-p	Sedan	2,285	3430	4-p	Coupe	2,185	
3610	7-p	Touring	1,625	DAGMAR "6-70"				3565	5-p	Brougham 4 d.	2,735	4-p	Coupe De Luxe	2,585		
3745	3-p	Country Club	2,075	3750	4-p	Roadster	\$3,500	2715	5-p	Touring	1,285	3540	5-p	Brougham Sedan	2,250	
3770	4-p	Coupe	2,125	3800	4-p	Sp. Tourer	3,500	2940	5-p	Sedan 4 d.	1,680	5-p	Broug. Sed. DeL.	2,685		
3905	5-p	Brougham Sedan	2,350	3700	4-p	Phaeton	3,500	2965	5-p	Brougham	1,760	5-p	Brougham 2 d.	1,795		
4030	7-p	Limousine	2,525	4200	4-p	Petite Coupe	4,500	FORD				4070	7-p	Sedan De Luxe	3,285	
4070	7-p	Limousine	2,525	4200	4-p	Petite Sedan	4,500	Without Starter and Dem. Rims				4010	7-p	Berline Sed. DeL.	3,385	
3995	7-p	Sedan	2,425	4500	4-p	De Luxe Coupe	4,750	1369	2-p	Runabout	\$260	3530	5-p	Victoria	2,285	
3850	7-p	Town Car	2,925	4700	5-p	Sedan	4,700	1494	5-6	Touring	290	5-p	Victoria De Luxe	2,685		
CADILLAC "V-63 Standard Line"				4800	7-p	Sedan	4,750	1521	2-p	Touring	335	"75"				
4190	2-p	Roadster	\$3,185	"6-60"				1521	2-p	With Balloon Tires	335	2-p	Speedster	2,195		
4280	7-p	Touring	3,185	3100	2-p	Roadster	1,785	1749	2-p	With Balloon Tires	520	2-p	Speedster De L.	2,485		
4200	4-p	Phaeton	3,185	3200	4-p	Sp. Touring	1,785	1882	5-p	Sedan, Tudor	580	4-p	Speedster	2,295		
4240	5-p	Coach	3,185	3150	5-p	Touring	1,985	1927	5-p	With Balloon Tires	605	4-p	Speedster De L.	2,585		
4610	7-p	Sedan	3,885	3400	2-p	Coupe	2,345	5-p	With Balloon Tires	660	2-p	Speedster De L.	2,585			
4525	5-p	Landau	3,835	3500	5-p	Sedan	2,345	1644	5-p	Touring	370	2-p	Enc. Sp'd'r DeL.	2,985		
4655	7-p	Std. Imperial	4,010	DAVIS				1749	2-p	With Balloon Tires	400	4-p	Tourster	2,195		
"Custom Built"				2650	4-p	M. o'War Road.	\$1,495	1749	2-p	Coupe	520	4-p	Tourster De L.	2,385		
(132 in.)				2915	4-p	Legionaire Tour.	1,495	1882	5-p	With Balloon Tires	545	5-p	Phaeton	1,985		
(138 in.)				2750	5-p	Phaeton	1,395	1927	5-p	Sedan, Fordor	660	5-p	Phaeton De Luxe	2,185		
4400	5-p	Coupe	3,975	3075	5-p	Sedan	1,595	5-p	With Balloon Tires	685	7-p	Touring	2,085			
4490	5-p	Sedan	4,350	3075	5-p	Imperial Sedan	1,795	FRANKLIN "11-A"				7-p	Touring De Luxe	2,285		
4590	7-p	Suburban	4,650	3065	5-p	Berline Sedan	1,795	2800	3-p	Sport Roadster	\$2,800	4-p	Coupe	2,435		
4655	7-p	Imp. Suburban	4,950	"91"				2845	5-p	Touring	2,650	5-p	Coupe De Luxe	2,885		
CASE J. I. C.				2835	4-p	Roadster	1,795	2965	3-p	Coupe	2,700	5-p	Brougham Sedan	2,395		
3260	3-p	Roadster	\$1,840	3020	5-p	Phaeton	1,695	3175	5-p	Sedan	3,200	5-p	Broug. Sed. DeL.	2,985		
3290	5-p	Touring	1,885	3075	5-p	Sedan	1,895	3080	5-p	Sport Sedan	3,350	5-p	Brougham 2 d.	2,195		
3470	5-p	Sp. Touring	2,160	3245	5-p	Imperial Sedan	2,095	3275	7-p	Limousine	3,500	7-p	Sedan De Luxe	3,485		
3570	4-p	Sub. Coupe	2,480	3215	5-p	Berline Sedan	2,095	3135	7-p	Cabriolet	4,400	7-p	Berl. Sed. De L.	3,585		
3640	5-p	Sedan	2,590	DIANA "St. 8"				GARDNER "Series 5"				7-p	Victoria	2,585		
3650	5-p	Brougham	2,590	5-p	Roadster	\$1,895	5-p	Coupe	\$1,275	LEXINGTON				7-p	Victoria De Luxe	2,985
"X"				5-p	Phaeton	1,895	5-p	Sedan	1,475	"Concord"				"Minute Man"		
3020	3-p	Roadster	1,570	5-p	Std. Sedan	1,995	5-p	Sp. Sedan	1,595	5-p	Touring	\$1,595	5-p	Roadster	2,145	
3050	5-p	Touring	1,595	5-p	De Luxe Sedan	2,195	5-p	Sp. Sedan	1,595	5-p	Touring (Enc.)	1,695	5-p	Touring	2,095	
3380	5-p	Sub. Coupe	2,290	5-p	Cabriolet	2,095	5-p	Sp. Sedan	1,595	5-p	Spec. Touring	1,795	5-p	Touring	2,195	
3380	5-p	Victoria	2,290	5-p	Brougham	2,095	5-p	Sp. Sedan	1,595	5-p	Sedan	2,135	5-p	Touring	2,345	
3400	5-p	Sedan	2,385	DODGE BROTHERS				3010	5-p	Touring	1,395	5-p	Cal. Touring	2,495		
"Y"				2473	2-p	Roadster	\$ 855	3240	5-p	Brougham	1,595	5-p	Cal. Touring	2,495		
3950	7-p	Touring	2,225	2593	2-p	Special Roadster	955	3310	5-p	Sedan	1,795	5-p	Royal Coach			

Prices and Weights of Current Passenger Car Models

PRICE

\$1,600
2,200
2,300

\$1,695

\$1,250

1,250

1,595

1,795

\$1,225

1,225

1,850

1,795

2,095

2,095

2,195

1,630

1,205

1,320

1,340

1,580

1,780

1,260

1,575

1,575

1,575

1,775

1,975

3,255

3,755

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SHIP.
WT. PASS. BODY STYLE. PRICE

LINCOLN (Cont'd)

4565	4-p	Phaeton	\$4,000
4565	4-p	Sport Touring	4,500
4565	4-p	Coupe	4,600
4775	4-p	Sedan	4,800
4825	5-p	Sedan	4,900
4865	7-p	Sedan	5,100
4945	7-p	Limousine	5,300

LOCOMOBILE "48"

5280	4-p	Sportif Tour	\$ 7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Drive Lim.	10,050
5600	7-p	Cabriolet	10,300

"J-8"

-----	2-p	Roadster	2,150
-----	5-p	Touring	1,785
-----	5-p	Sedan	2,285
-----	5-p	Brougham	2,285

McFARLAN "G"

"SV"

8700	2-p	Roadster	\$2,650
-----	2-p	Spec. Roadster	2,900
3600	5-p	Touring	2,650
-----	7-p	Touring	2,750
-----	4-p	Coupe	3,180
8850	5-p	Sedan	3,180
-----	5-p	Spec. Sedan	3,180
8850	7-p	Sedan	3,280
-----	5-p	Sub. Sedan	3,380
-----	7-p	Sub. Sedan	3,480
-----	5-p	Brougham 4 d.	3,180

"TV"

4000	2-p	Roadster	5,400
4600	4-p	Sp. Touring	5,600
4900	4-p	Coupe	6,720
5200	4-p	Tour. Sedan	6,720
5200	7-p	Tour. Sedan	6,810
-----	6-p	Sedan	6,720
-----	7-p	Sedan	6,810
-----	7-p	Spec. Sedan	6,810
-----	7-p	Enc. Sedan	7,110
-----	7-p	Sub. Sedan	7,110
5200	7-p	Town Car	9,000

MARMON "74"

3695	2-p	Roadster	\$3,165
3604	5-p	Phaeton	3,165
3704	7-p	Touring	3,165
3604	5-p	Club Phaeton	3,465
3704	7-p	Club Touring	3,465
3799	5-p	Brougham Coupe	3,295
3729	3-p	Coupe De Luxe	3,455
3869	5-p	Sedan	3,295
3859	5-p	Sedan De Luxe	3,775
3999	7-p	Sedan	3,370
3974	7-p	Sedan De Luxe	3,850
3969	5-p	Sedan Limousine	3,900
3999	7-p	Sedan Limousine	3,975

MERCER "G"

3860	3-p	Runabout	\$4,500
3950	6-p	Touring	4,500
3900	4-p	Sporting	4,500
4070	4-p	Coupe	6,250
4240	5-p	Sport Sedan	6,250
4350	4-p	Tour. Limousine	6,500
4300	4-p	Brougham	6,500

MOON Series "A"

2440	5-p	Roadster	\$1,395
2625	3-p	Cab. Roadster	1,695
2460	5-p	Touring	1,295
2710	5-p	DeL. Sedan 2d.	1,695
2850	5-p	Sedan 4 d.	1,595
3850	5-p	DeLuxe Sedan 4d.	1,785

Newport

2760	5-p	Touring	1,495
2920	5-p	Sedan	1,815
3090	5-p	Petite Sedan	1,915

Metropolitan

2860	5-p	Touring	1,515
3020	5-p	Sedan	1,995
3190	5-p	Sp. Sedan	2,095

London

3270	5-p	Sp. Touring	1,985
3590	5-p	Petite Sedan	2,540

NASH "Special"

2870	2-p	Roadster	\$1,095
2960	5-p	Touring	1,095
3120	5-p	Sedan	1,225
3270	5-p	Sedan 4 d.	1,545

"Advanced"

3320	3-p	Roadster	1,375
3400	5-p	Touring	1,375
3550	5-p	Sedan 2 d.	1,485

"Advanced"

3480	7-p	Touring	1,525
3640	4-p	Victoria	2,090
3750	5-p	Coupe 4 d.	2,190
3890	7-p	Sedan	2,290

SHIP.
WT. PASS. BODY STYLE. PRICE

OAKLAND "6-54"

2420	3-p	Roadster	\$1,095
2510	3-p	Sp. Roadster	1,195
2485	5-p	Touring	1,095
2550	5-p	Sp. Touring	1,195
2620	5-p	Coach	1,215
2620	3-p	Landau Coupe	1,295
2720	4-p	Coupe	1,495
2700	5-p	Sp. Sedan	1,375
2860	5-p	Sedan	1,545
2885	5-p	Landau Sedan	1,645

OLDSMOBILE "30"

2145	2-p	Roadster	\$ 890
2270	2-p	Sp. Roadster	985
2200	5-p	Touring	890
2360	5-p	Sp. Touring	1,015
2330	2-p	Bus. Coupe	1,045
2460	4-p	Coupe	1,175
2410	5-p	Coach	1,075
-----	5-p	De Luxe Coach	1,150
2570	5-p	Sedan	1,285
2740	5-p	De Luxe Sedan	1,375

OVERLAND "91" 4

1919	5-p	(100 in. W. B.) Touring	\$495
-----	2-p	Coupe	635
2205	5-p	Sedan De Luxe	715
2202	5-p	Std. Sedan 2 d.	655

"93" 6

2443	5-p	(112 1/4 in. W. B.) Sta. Sedan	895
2584	5-p	Sedan De Luxe	1,150

PACKARD "G"

3643	4-p	(126 in. W. B.) Roadster	\$2,785
3653	5-p	Touring	2,585
3595	4-p	Sp. Touring	2,750
3753	4-p	Coupe	2,585
3937	5-p	Sedan	2,585

(133 in. W. B.)

3793	7-p	Touring	2,785
4043	7-p	Sedan	2,785
4143	7-p	Sedan Limousine	2,885

"g"

4060	4-p	(136 in. W. B.) Runabout	3,950
4090	5-p	Touring	3,759
4023	4-p	Sp. Touring	3,900
4242	4-p	Coupe	4,650
4528	5-p	Sedan	4,750

(143 in. W. B.)

4199	7-p	Touring	3,950
4655	7-p	Sedan	5,000
4710	7-p	Sedan Limousine	5,100

PAIGE "21-24"

3875	4-p	Phaeton	\$2,165
3935	7-p	Phaeton	2,165
3975	5-p	Brougham	2,195
4050	5-p	Brough. De Luxe	2,395
-----	5-p	Sedan De Luxe	2,395
4325	7-p	Sedan De Luxe	2,840

PEERLESS "6-72"

3175	5-p	(126 in. W. B.) Touring	\$1,895
3425	5-p	Coupe	2,495
3500	5-p	Sedan	2,565

(133 in. W. B.)

3,275	7-p	Touring	1,995
3300	2-p	Roadster	2,285
3700	7-p	Sedan	2,765
3825	7-p	Limousine	2,925

"8-67"

3950	4-p	Phaeton	2,945
3995	7-p	Phaeton	2,990
4300	5-p	Town Brougham	3,895
4310	5-p	Town Sedan	3,895
4400	7-p	Sub. Sedan	3,995
4525	7-p	Berline Lim.	4,195
4100	4-p	Victoria Coupe	3,545
4150	5-p	Sub. Coupe	3,595

PIERCE-ARROW "33"

4350	2-p	Runabout	\$5,250
4500	4-p	Touring	5,250
4590	7-p	Touring	5,250
4730	3-p	Coupe	6,800
4800	4-p	Sedan	6,900
4960	7-p	Sedan	7,000
4750	4-p	Coupe Sedan	6,900
4730	6-p	Brougham	6,800
4850	7-p	Limousine	7,000
5060	7-p	Enclosed Lim.	7,000
4780	7-p	French Lim.	7,000
4730	6-p	Landaulet	7,000

"80"

3205	2-p	Roadster	2,895
3260	4-p	Phaeton	3,095
3385	7-p	Phaeton	2,895
-----	5-p	Coach	3,150
3365	4-p	Coupe Landau	3,820
3335	4-p	Coupe	3,695
3440	5-p	Sedan	3,895
3560	7-p	Sedan	3,995
3615	7-p	Enc. Drive Lim.	4,045

SHIP.
WT. PASS. BODY STYLE. PRICE

REO "T-6"

3350	2-p	Sp. Roadster	\$1,765
3182	5-p	Sp. Touring	1,595
3350	2-p	Coupe	1,645
3450	4-p	Coupe	1,975
3400	5-p	Sedan 4 d.	1,645
3545	5-p	Sedan	2,085
3705	5-p	Brougham 4 d.	2,235

REVERE "25"

3900	2-p	Sp. Roadster	\$2,750
3975	4-p	Speedster	2,750
4050	5-p	Touring	2,750
4300	5-p	Sedan	3,800

"M"

3700	2-p	Roadster	3,200
3800	4-p	Sportster	3,200
3970	5-p	Touring	3,200
4400	5-p	Sedan	4,000

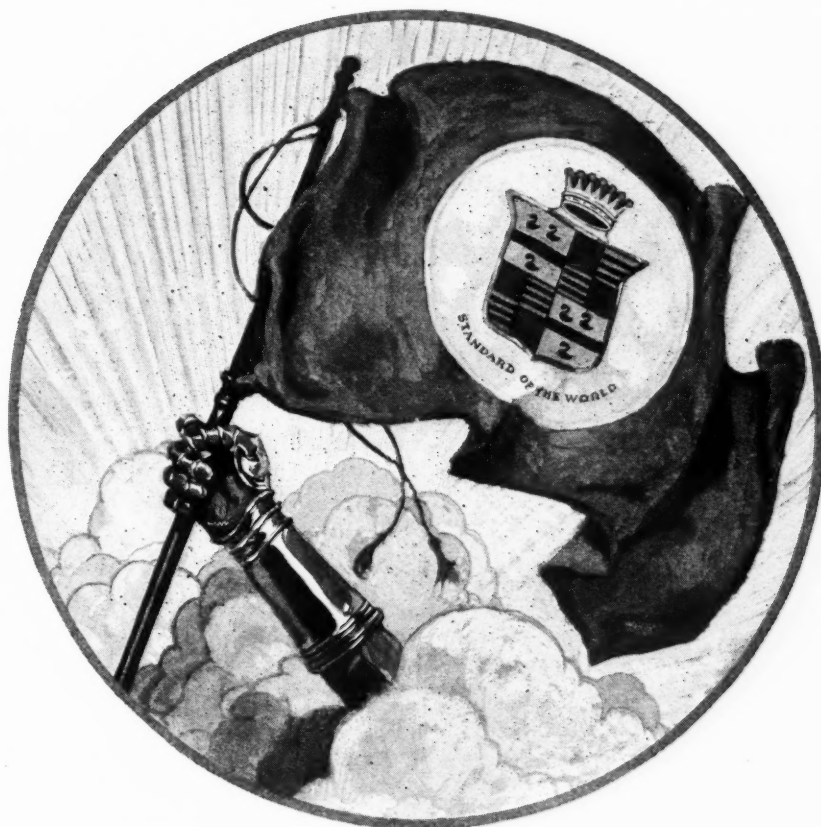
RICKENBACKER "Six" (117 in. W. B.)

-----	3-p	Roadster	\$1,595
-----	5-p	Phaeton	1,495
-----	3-p	Coupe Roadster	1,695
-----	3-p	<i>De Luxe</i>	1,820
-----	4-p	Coupe De Luxe	1,995
-----	5-p	Spec. Sedan	1,795
-----	5-p	<i>De Luxe</i>	1,920
-----	7-p	Sedan De Luxe	2,070
-----	5-p	Coach Brougham	1,595
-----	5-p	<i>De Luxe</i>	

Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

MAKE AND MODEL			WHEEL BASE (Inches)			TIRE SIZE			Decimals-Balloons			ENGINE			ELECTRICAL SYSTEM			REAR AXLE			BRAKES			STEERING GEAR—MAKE			CHASSIS LUBRICATION—Type and Make			ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS		
Model	Make	Number of Cyls.	Bore and Stroke	Valve Arrangement	Camshaft Drive	Eng. or Sep.	Piston Material	No. Main Bear.	Oil System	Oil Cleaner?	Cooling System	Thermosist?	Carburetor	Air Cleaner?	Ignition System	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	Type and Make	Gear Ratio	Foot—Type and Location	Hand—Type and Location	Wheel Type	Optional Type	Rear Springs—Type and Length	Type and Make					
Ajax	4	30x4.75	170	1	He.	Int.	CI	7	P	N	Pu	N	Car.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	f-Uni.	1/2	Own.	4.70	B-F	E-T	M	Ross.	Pr-Al	A-K	Atwater Kent			
Anderson	4	31x5.25	23.3	1	He.	Int.	CI	4	P	N	Pu	N	Zen.	ZZZZ	Wes.	A.L.	P.B.&B.	Dur.	f-Uni.	1/2	Own.	4.75	E-R	E-T	M	Ross.	Pr-Al	A-L	Auto-Lite			
Apperson	6	32x5.77	24.4	1	He.	Int.	CI	4	P	N	Pu	N	Zen.	ZZZZ	Wes.	A.L.	P.B.&B.	Nec.	m-Sli.	1/2	Own.	4.50	E-R	E-T	M	Ross.	Pr-Al	Ada	Adams			
Apperson	6	32x5.77	24.4	1	He.	Int.	CI	5	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.25	B-F	B-F	B-F	Ross.	Pr-Al	Ala	Alameda			
Auburn	4	32x6.20	21.0	1	He.	Int.	CI	5	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B&B	Burg & Beck			
Auburn	6-66	32x6.20	21.0	1	He.	Int.	CI	5	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Auburn	6-83	32x6.20	21.0	1	He.	Int.	CI	6	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Barley	6-50	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.	m-Sli.	1/2	Own.	4.63	E-R	E-R	M	Ross.	Pr-Al	B-L	Brown-Lipe			
Buck	Standard	32x6.20	21.0	1	He.	Int.	CI	4	P	N	Pu	N	Sch.	ZZZZ	Wes.	A.L.	P.B.&B.	Own.														



THE PLEASANT COMPULSION OF DOING WELL

No man who serves Cadillac either in the factory or in the sales-field owns himself. He ceases to be a free agent as soon as he assumes the responsibility of that association. From that moment forward he is under the ennobling tyranny of high public expectations.

He is under the compulsion of giving the very best that is in him, because nothing less will be accepted by the public from Cadillac.

The admiration accorded Cadillac is something much more than a fine feeling. Maintained in the minds of millions, it is a standard below which Cadillac may not fall.

It is expected of the car that it shall surpass—and the same thing is expected of the personal efforts of the craftsmen who build it, of the engineers who design it, of the executives who shape its policies, and, finally,

of the men who distribute it to the public.

The heads of most business institutions obey an inward monitor in striving after the thing vaguely called high quality.

Cadillac is fortunate in that it must not only follow this inward ideal, but has imposed upon it a command from the outside world which it dare not disobey.

The same compulsion operates upon every vendor who comes to Cadillac to offer materials or accessories of any sort whatsoever. He *knows* that ordinary standards will not do—that he *must* give Cadillac greater measure of intrinsic merit.

These facts constitute an assurance of value to the buyer of the Cadillac beside which the inducements for consideration offered by any other car are unimportant.

CADILLAC

Division of General Motors Corporation

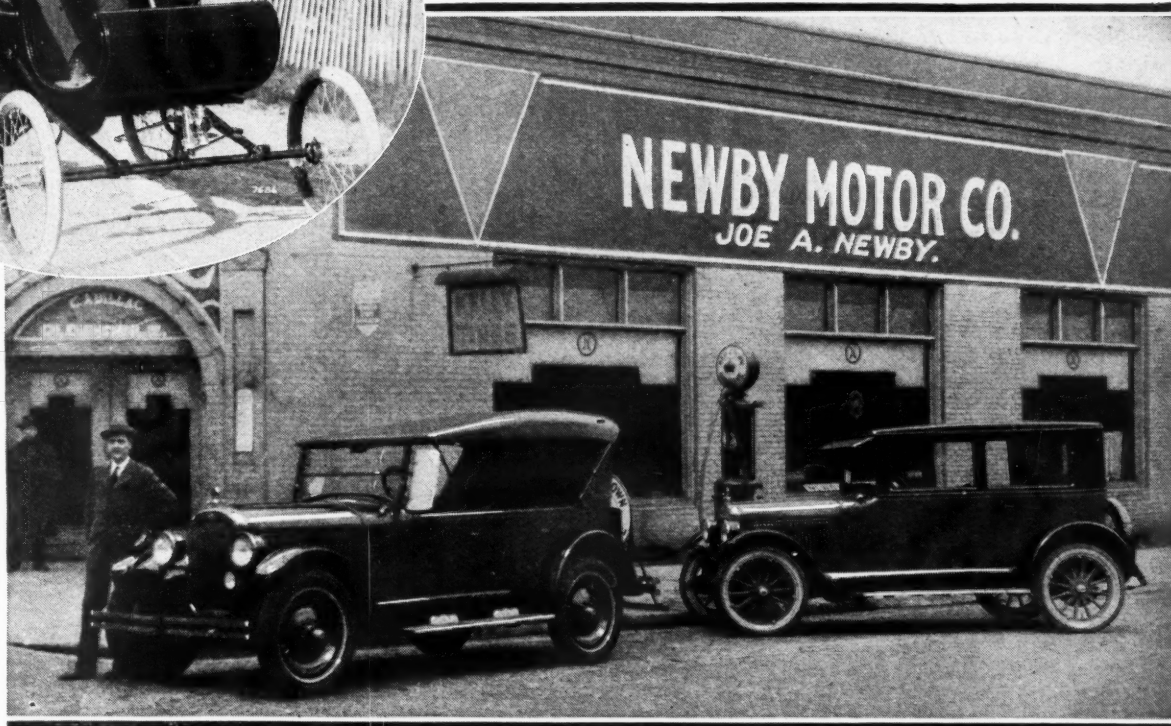


Mechanical Specifications of Current Passenger Car Models—Continued

(This list comprises cars distributed on a national basis)

MAKE AND MODEL										ENGINE										ELECTRICAL SYSTEM										REAR AXLE										BRAKES										Chassis Lubrication—Type and Make										ABBREVIATIONS—NAMES OF MFRS OF STOCK PARTS																																																																																																																																																																																																																																																									
Wheel Base (Inches)										Tire Size										Decimals-Balloons										Male and Model										Bore and Stroke										Rated H.P.										Piston Displacement										Valve Arrangement										Camshaft Drive										Crankcase Inlet										Piston Material										No. Main Bear.										Oiling System										Oil Cleaner?										Cooling System										Thermostat?										Carburetor										Air Cleaner?										Ignition System										Generator and Starter Make										Clutch—Type and Make										Gear Set—Make										Universal—Type and Make										Type and Make										Gear Ratio										Foot—Type and Location										Hand—Type and Location										4 Wheel (Optional)										Steering Gear—Type and Make										Rear Springs—Type and Length										Type and Make									
Locomobile..... Jr. 8										30x5.70										8-2 1/4x4										Ow.										48										6-4 1/2x5 1/2										325										I										He.										Int.										CI										5										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										P. Ow.										Ow.										m-Spi.										Pr-Ze.										A-K—Atwater Kent																																																																					
Locomobile..... 48										35x6.75										48.6										325										I										He.										Int.										CI										7										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Ze.										A-K—Atwater Kent																																																																																																			
Marmen..... 74										32x6.20										33.8										340										I										He.										Int.										CI										3										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
McFarlan..... TV										32x6.20										27.3										268										I										He.										Int.										CI										3										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Mercer..... 6										32x4 1/2										23.4										166										L										He.										Int.										CI										4										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Moon..... Newport										31x5.25										23.4										166										L										He.										Int.										CI										4										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Moon..... Metropolitan										32x6.20										27.3										242										L										He.										Int.										CI										4										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Moon..... Series A										32x6.20										27.3										242										L										He.										Int.										CI										4										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Nash..... Advanced										32x6.20										25.4										249										I										He.										Int.										CI										3										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Nash..... Special										31x4.95										19.8										185										L										He.										Int.										CI										3										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Oakland..... 6-54										31x4.95										19.8										185										L										He.										Int.										CI										3										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Oldsmobile..... 30										30x3 1/2										18.2										169										L										He.										Int.										CI										3										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Overland..... 91										30x3 1/2										19.6										154										L										He.										Int.										CI										3										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
Overland..... 93										30x4.95										21.6										185										L										He.										Int.										CI										7										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
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Roamer..... 6-54-E										33x6.00										38.4										268										L										He.										Int.										CI										9										P F										F										Pu.										N										Str.										N										DeLo.										DeLo.										D. Ow.										Ow.										m-Spi.										Pr-Al.										A-K—Atwater Kent																																																																																																			
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Our Dealer in 1902— and Today



Top picture shows our dealer, J. A. Newby, in a "Curved Dash" Oldsmobile in May, 1902. Other photo shows Mr. Newby and the latest Oldsmobile Six models in front of his showroom at Newcastle, Indiana.

Mr. Newby of Newcastle Is Sold On Oldsmobile

Mr. Newby, who handled the Oldsmobile in 1902, is again an Oldsmobile dealer after a lapse of years. The same type of factory co-operation that interested Mr. Newby in Oldsmobile twenty-three years ago influenced him in taking on the dealership again. The Oldsmobile dealer policy is a very liberal one.

OLDS MOTOR WORKS, LANSING, MICHIGAN
OLDS MOTOR WORKS OF CANADA, LIMITED, OSHAWA, ONT.

OLDSMOBILE Six

Beauty...

Performance...

Price

not one But All Three

Stewart-Warner

Guarantees Dealers Profit—



Model 305
List Price \$115



Model 400
List Price \$25

The First Complete Matched-Unit Radio

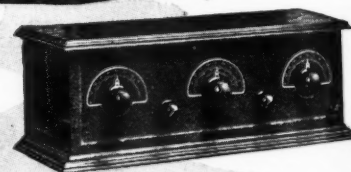
STEWART-WARNER RADIO is the "Matched-Unit" Radio. By this we mean that Stewart-Warner Radio Products—Instruments, Reproducers, Tubes and Accessories—are units that are all built by Stewart-Warner to function together in perfect unison. A combination of these units forms Stewart-Warner Matched-Unit Radio.

From the ground up this Radio is designed to achieve the utmost in radio reception. Because of the unified action of Stewart-Warner Radio, clear, full tones come in from stations near and far.

Here are the Matched Units of Stewart-Warner Radio—a complete line for dealers:

1. Stewart-Warner Radio Instruments, a model and a price to fit every purse and fill every need.
2. Stewart-Warner Reproducer, a perfect companion piece for Stewart-Warner Radio Instruments.
3. Stewart-Warner Radio Tubes—the tubes that have startled the radio world by their superior performance.
4. Aerial and Ground Equipment, and complete auxiliary apparatus of the highest quality.

Model 300
List Price \$65



Model 410
List Price \$65

Console Table including Built-in Speaker and Battery Compartment, without Radio.

Stewart Matched-

"RADIO INSTRUMENTS—TUBES—
96 Direct Factory Branches

Radio Franchise

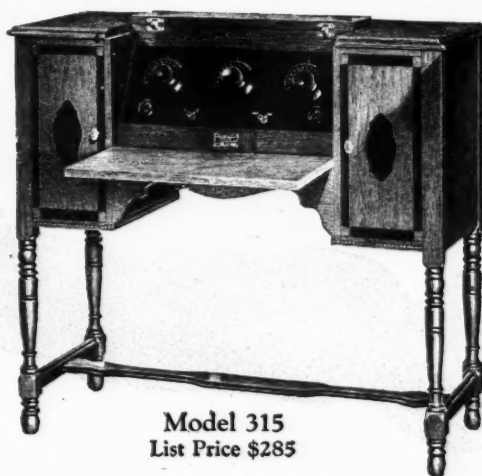
Protection and Permanence

THE Stewart-Warner name is a by-word for quality. For more than twenty years Stewart-Warner has been manufacturing magnetic, electrical and mechanical automobile accessory equipment that has been the standard of the field. To-day, more than ten million cars carry Stewart-Warner Products as standard equipment. No doubt your car is equipped with a Stewart-Warner Speedometer, a Stewart-Warner Vacuum Tank or other accessory.

Stewart-Warner Radio is another Stewart-Warner achievement. The quality of Stewart-Warner Radio is unquestioned, because the entire world knows that any merchandise bearing the Stewart-Warner name is superior in every respect.



Model 320
List Price \$450



Model 315
List Price \$285



S.W.
Radio Tube
List Price \$3

STEWART-WARNER is distributing its radio products to dealers solely through its own, long established, world wide organization of ninety-six exclusive Stewart-Warner Wholesale Distributors. We have been 15 years in building up this organization. It is the only organization of its kind in the radio field.

These Stewart-Warner Distributors positively will not wholesale Stewart-Warner Radio products to any one except dealers holding Stewart-Warner Radio Franchises. Stewart-Warner stands alone in its ability to give dealers this 100% protection.

We pledge you this opportunity to conduct a successful business—and our word is backed by years of sound business dealings with thousands of leading dealers all over the world.

Furthermore, every Stewart-Warner Wholesale Distributor maintains a corps of factory-trained experts—both sales and technical—whose explicit duties are to make a 100% success of

every Stewart-Warner Radio Dealer. Our Radio Dealer Franchise carries with it this expert aid—this service that insures a profitable business for every retailer of Stewart-Warner Radio.

The Stewart-Warner Franchise places dealers so that they are not in competition with each other. It gives the full measure of Profit to each and every dealer. It associates the dealer with a radio manufacturer of large resources. This means Permanence for the dealer because the large manufacturer is the manufacturer who endures.

Fill out the application blank below and mail it to us. Our representative will call with some additional information very interesting to you.

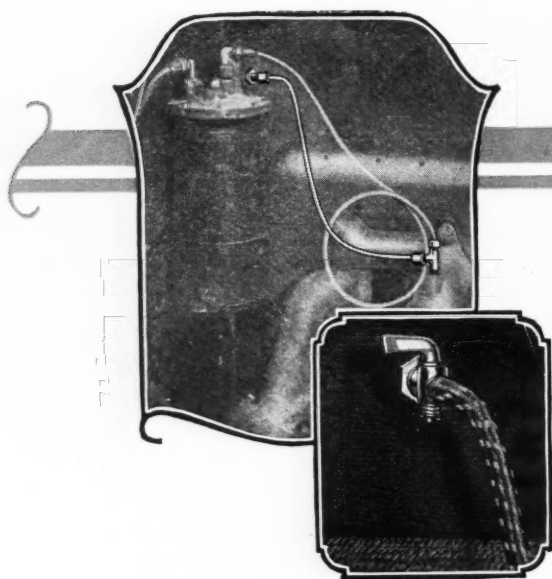
STEWART-WARNER SPEEDOMETER CORPORATION
CHICAGO - U. S. A.

Radio Division
Stewart-Warner Speedometer Corporation
1828 Diversey Pkwy., Chicago, Ill.

Gentlemen:—I want to be considered in connection with a Stewart-Warner Radio Dealership and to discuss the details with your representative.

Date _____ Name _____
Address _____
City _____ State _____

Warner
Unit Radio
REPRODUCERS—ACCESSORIES
Throughout the World



Quickly and Permanently Installed another big selling feature of Auto-Vac

Closed car owners like the easy and quick installation of the AUTO-VAC. In 20 minutes or less any mechanic can install this wonder cleaner and install it permanently. The one size fits all cars—you *don't have to carry extra fittings to hook up the AUTO-VAC*. This is but one of the many interesting features of a great accessory. Its wonderful performance—fine construction—ease of operation are of equal interest to everyone with a closed car. Dealers everywhere say AUTO-VAC is one of the best selling accessories they have ever stocked. Write us—we have an interesting proposition for you.

RAY MANUFACTURING CO., Cedar Rapids, Iowa

The AUTO-VAC Assembly is complete with polished aluminum nozzle—web covered rubber hose—two way connection for intake manifold—cowl cut off and heavy copper tubing.

Individual AUTO-VACS are packed in handsome cartons. Unit package of 6 cleaners contains attractive display material for counter and windows.





IT IS not how many cars the factory makes but how many the dealer can profitably sell that counts.

If Manufacturer "A" produces 50,000 cars and has 500 agents the average sale per dealer is 100. If Factory "B" produces 5,000 cars and has 50 dealers, the average sale per dealer is 100 cars.

Sometimes dealers base their calculations of profit on how many cars a manufacturer produces and not on what they sell. Think this over.

FREDRICK E. MOSKOVICS
President
STUTZ MOTOR CAR COMPANY
OF AMERICA, INC.
Indianapolis, Indiana

STUTZ

FORGET that Thermoid is far heavier than the ordinary lining.

Forget that Thermoid gives 40 per cent. better and longer service.

Forget that it is the established product of a reliable manufacturer.

Just remember that Thermoid is the most consistently advertised lining on the market—that month after month, year after year—the Thermoid name is meaning more and more to the public.

That one point alone would make Thermoid the best line for you to specialize on. And that point is *not* alone—by any means.

THERMOID RUBBER COMPANY Factories and Main Offices **TRENTON, N. J.**

Makers of Thermoid Transmission Lining, Thermoid-Hardy Universal Joints and Mechanical Rubber Goods

*This Sign Helps
Our Advertising
to Advertise
Your Shop*



Hydraulic Compressed
Brake Lining
"For Short Stops and Long Service"

Low-cost Transportation **Star** **Cars**

More Power—Superior Quality

The easiest factor to sell in the automobile field is power. It presents the strongest appeal to most automobile buyers.

All of us have sporting blood in our veins. We like to go by the other fellow in traffic; to beat him to the start; to show the tail lamp on grades; to be able to pull out of bad mud or sand that stops the majority.

There is a certain satisfaction in knowing, even if it is not used, that always we have power in reserve.

On brake tests, the real measure of driving power, the Star averages more power.

On brake tests, the Star averages more driving power *per cubic inch of piston displacement*.

On brake tests, the Star averages more driving power *per pound of weight*.

Measured by every test that determines driving power, the Star leads.

This unusual power is a strong selling argument and partially accounts for the fast-growing popularity of the Star Car.

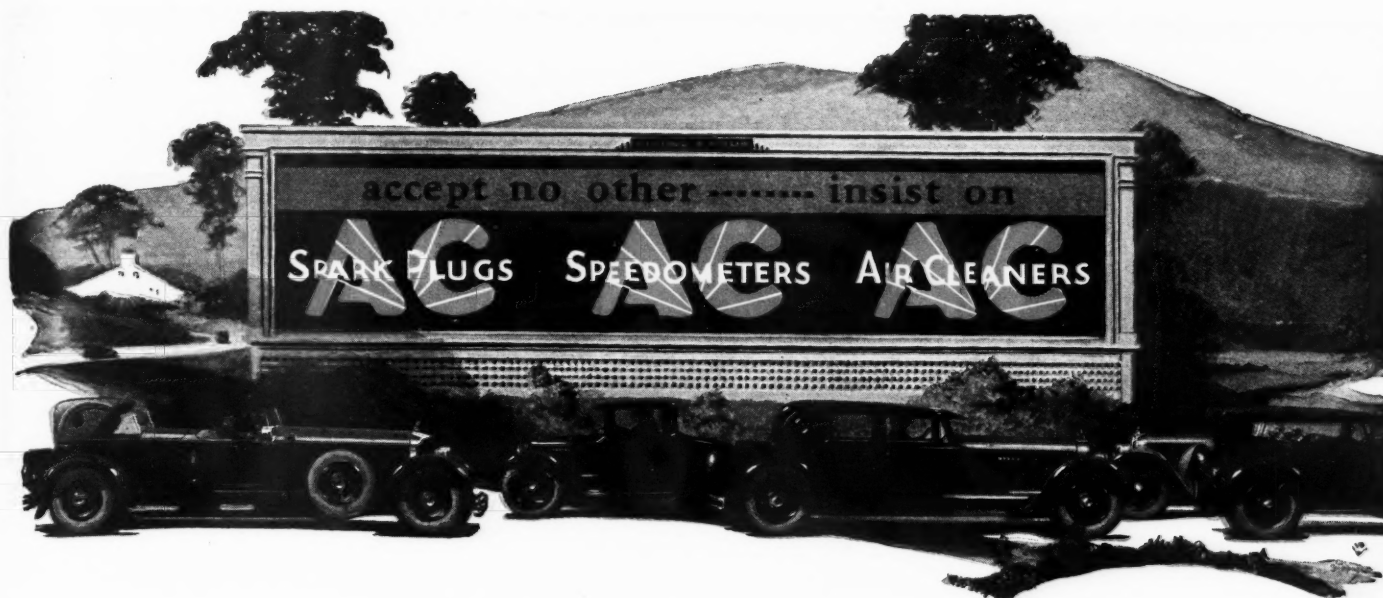
Automobile merchants are showing their appreciation of the unusual selling and profit possibilities of the Star line by securing selling franchises by the hundreds monthly. Ask us why.

DURANT MOTORS, INC., BROADWAY AT 57th ST., NEW YORK CITY

General Sales Department, 1819 Broadway, New York City

Dealers and Service Stations Throughout the United States and Canada

PLANTS: ELIZABETH, N. J. LANSING, MICH. OAKLAND, CAL. TORONTO, ONT.



What AC Means to the Dealer

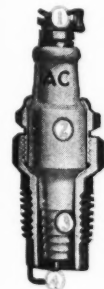
AC Spark Plugs



More than 80% of all the cars produced in this country, Fords excluded, are factory equipped with AC Spark Plugs. Among these cars are:

Apperson	Dodge	Maxwell
Buick	Brothers	Nash
Cadillac	Durant	Oakland
Case	Essex	Oldsmobile
Chandler	Flint	Paige
Chevrolet	Hudson	Star
Chrysler	Hupmobile	Vellie
Cleveland	Kissel	Westcott
Davis	Marmon	Wills Sainte Claire

AC 1075 for Fords



One glance tells the whole story — Why the AC 1075 is an especially good plug for Fords—Here are its features:

- 1 Spring Terminal Clip
- 2 Heavy Body Porcelain
- 3 High Temperature Fins—Patented Carbon-proof Porcelain
- 4 Heavy Electrode Forms Natural Oil Drain.

Dealers who carry a good stock of AC products can build a profitable business. The demand is assured because of their use as car equipment.

* * *

Backed by strong advertising.

* * *

They afford you the margin of profit you should get.

AC Spark Plug Company, FLINT, Michigan
Makers of AC Spark Plugs—AC Speedometers—AC Air Cleaners

AC-SPHINX
Birmingham
ENGLAND

AC-OLEO
Levallois-Perret
FRANCE

AC Speedometers



The Model for Fords

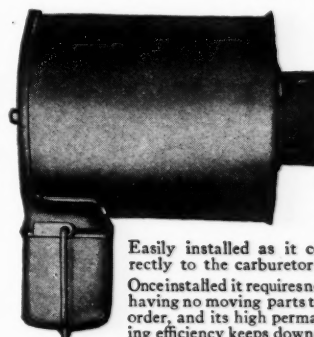
Miles per hour, miles per trip, total mileage—it tells them all.

Simple direct drive is a big improvement over previous types of drives as it does away with the swivel joint.

Complete with all attachments and once installed is a source of constant satisfaction. The cost is surprisingly low—\$15. (\$21.00 in Canada.)

That AC Speedometers can be depended upon for trouble-free operation, is evidenced by the fact that they are original equipment on such cars as Buick, Cadillac, Chevrolet, Chrysler, Gray, Maxwell, Oakland, Oldsmobile and GMC Trucks.

AC Air Cleaners



Easily installed as it connects directly to the carburetor.

Once installed it requires no attention, having no moving parts to get out of order, and its high permanent cleaning efficiency keeps down repair bills.

Comes complete with all attachments and is reasonably priced—\$5.00 to \$7.00 (\$7.00 to \$10.00 in Canada) depending on the size required.

GATES HOSE

"The Standardized Radiator Hose"

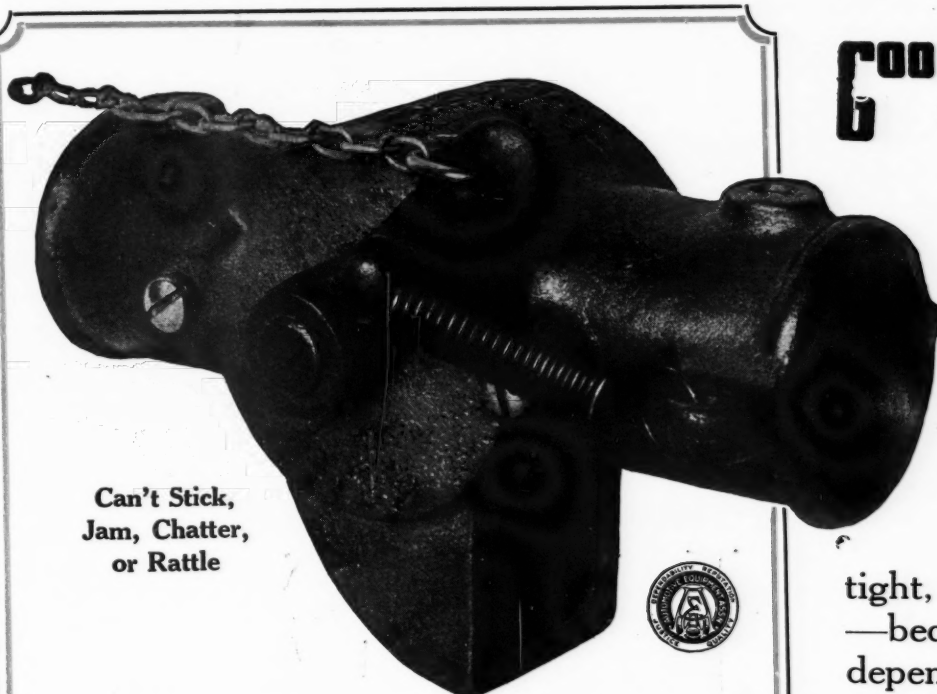


Marked by Inches
Easily Cut to Length

It only takes a few inches of radiator hose for a car—yet we are packing and shipping 3½ miles of Gates Vulco Hose every day. A remarkable tribute to quality, isn't it?

Made by the World's Largest
Manufacturers of Fan Belts

Its Design Insures Satisfaction and Keeps it in Steady Demand



Can't Stick,
Jam, Chatter,
or Rattle

GOODRICH-LENHART PRODUCTS

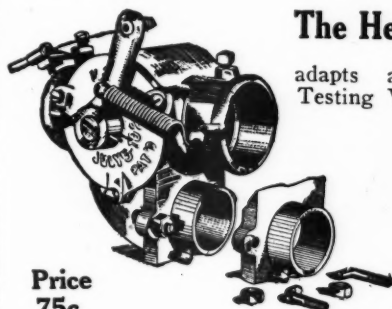
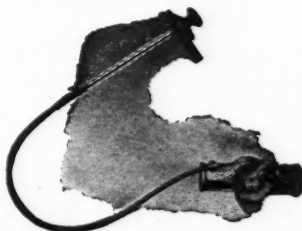
The New Dash Control

Convenient to the driver's hand on the dash. It has a positive catch that enables the driver to lock the shutter open in any position.

Handsomely finished—easily installed.

Price, alone \$2.00.

Locks with a half turn of the handle



Price
75c

The Heater Valve Attachment

adapts any Goodrich-Lenhart Motor Testing Valve to fit heater tubing. Its use with the Dash Control permits positive regulation of the heat.

The attachment fastens over the bell mouth of the valve, and the heater tubing fits into or over it. Outside diameters of heater tube and exhaust pipe needed in ordering.

GOODRICH-LENHART Motor Testing Valve

gives universal satisfaction because its design allows free passage of the exhaust in both open and closed position—because its valve is absolutely tight, both open or closed—because it can always be depended on to work smoothly and easily—because it is made up of a few simple, interchangeable parts—and because it will serve for years unaffected by wear, heat, or vibration.

It pays to sell a cut-out designed to give satisfaction. Let us tell you more about it—Write.

Prices:—Motor Testing Valve, complete with pedal, pulley and chain, in sizes from 1 1/4 to 3", \$3.00 to \$5.00. With Dash Control attachment, \$1.00 extra. With Heater Valve attachment, .75 extra.

**Goodrich - Lenhart
Manufacturing Co.**
HAMBURG PENNA.

PACKARD

STUTZ

LINCOLN

GRAY

HUDSON

NASH

JORDAN
CHEVROLET

Speaking of Cars,
Would You Prefer
A Department
Store or Just a Small
Corner Shop?

WRITE FOR THE MONEY-MAKING DETAILS.

PAIGE

CADILLAC

MAXWELL

STAR.

CASE

DURANT

STUDEBAKER

WILLYS-

EERLESS

CHRYSLER

ROLLS ROYCE

MAYBACH

CLEVELAND

HUPMOBILE

REO

BUICK

DODGE

OVERLAND

CASE ROLLS ROYCE FORD BUICK REO PEERLESS
CLEVELAND CHRYSLER

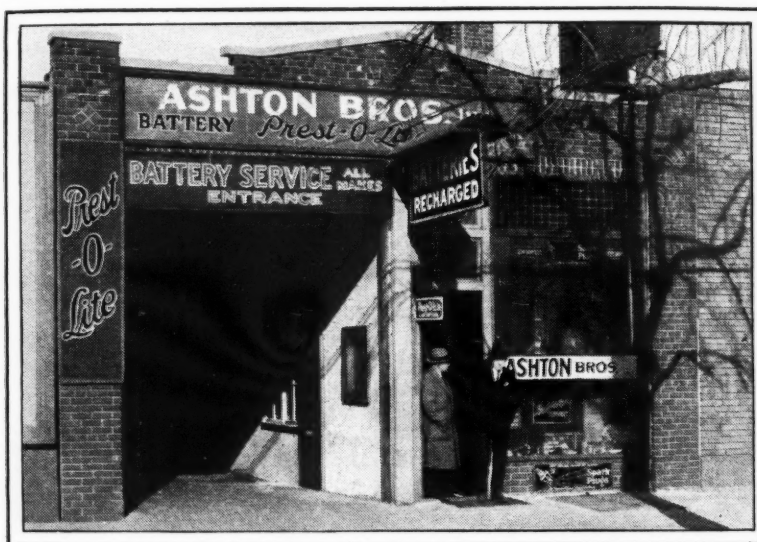
This Franchise
with Cars from
\$495 up to \$2495
Gives "Department
Store" Volume.

Willys-Overland, Inc., Toledo, Ohio - Willys-Overland Sales Co. Ltd., Toronto, Canada.

GRAY STUTZ NASH PAIGE DODGE
LINCOLN CHEVROLET STUDEBAKER CADILLAC
STEARNS MARMON AUTOMOBILE
HUDSON FORD MAXWELL DURANT
ESSEX

**FINE
MOTOR CARS**

Prest-O-Lite



A splendid increase in battery business since signing up with Prest-O-Lite

THE Ashton Storage Battery Company, Brooklyn, N. Y. (illustrated above), is enthusiastic about its increased battery business since co-operating with the new Prest-O-Lite sales policy. This company now buys Prest-O-Lite Batteries direct from the factory—not from the jobber. This plan enables them to sell genuine, full-capacity Prest-O-Lite Batteries at prices as low as \$15.50.

Hundreds of dealers in all parts of the country have doubled and even trebled their battery business with Prest-O-Lite. You can do it too. Quicker turnover, larger profits and more satisfied customers are yours when you sell Prest-O-Lite Batteries.

Perfected in the world's largest electro-chemical research laboratories, Prest-O-Lite Batteries are as fine as can be

built. And, we readily assure all dealers that the present widely accepted standard of excellence will be maintained.

A tremendous advertising campaign in *The Saturday Evening Post* and a long list of national publications is telling millions of motorists every month the story of Prest-O-Lite's unbeatable value. Co-operate with Prest-O-Lite. Write for our service station proposition.

PREST-O-LITE RADIO BATTERIES, too, offer you a splendid selling opportunity. The new Prest-O-Lite Radio Chart tells your customers the exact sizes of "A" and "B" storage batteries to use for best results. Complete information on request.

THE PREST-O-LITE CO., INC.
INDIANAPOLIS, IND.

New York San Francisco

In Canada: Prest-O-Lite Company of Canada, Ltd.
Toronto, Ontario



HIBBING PUBLIC SCHOOLS
DEPARTMENT OF INDUSTRIAL ARTS
JAY F. KNOWLTON, DIRECTOR
HIBBING, MINNESOTA

April 22, 1925

The Manhattan Rubber Mfg. Co.
Passaic, N. J.

Gentlemen:

I want to extend my congratulations to your engineering department on the grade of brake lining, HYCOE, your company is producing, and also to thank you for the HYCOE Handbooks shipped me some time ago.

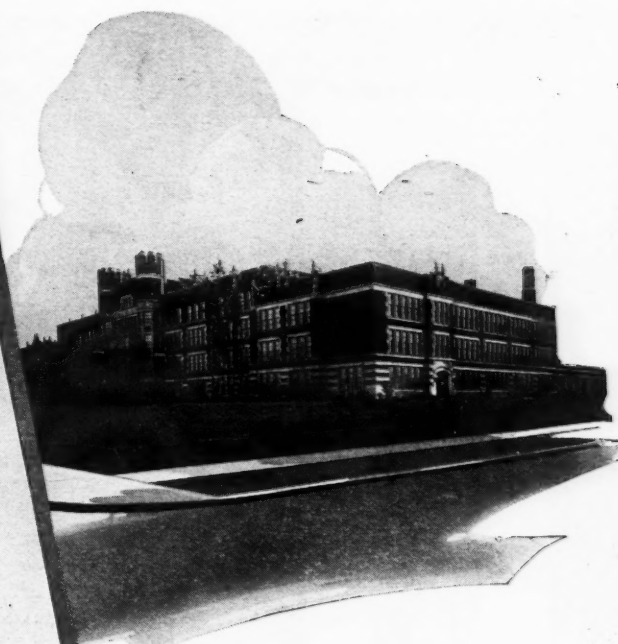
I have read and studied your Handbook and appreciate the service and honest advice your company is endeavoring to give to the Automotive world. I have found in this book the method of attaching and adjusting brake linings correctly explained. I am using the book as a class text on brakes and their care.

My confidence in the integrity of your engineers and the efficiencies of HYCOE, is daily increasing, as I have found them both reliable and ready to meet all emergencies.

Yours very truly,

W. H. H. H.
Automotive Instructor

ACL:EW



"Hibbing High School, one of the largest, finest and best equipped high schools in the world."

Hycoe

SETS A NEW BRAKING STANDARD

BRAKE LINING
plus — The
recommendation
of experts

THE MANHATTAN RUBBER MFG. COMPANY

Branches:

Chicago
Detroit

New York
Baltimore

Birmingham
Boston

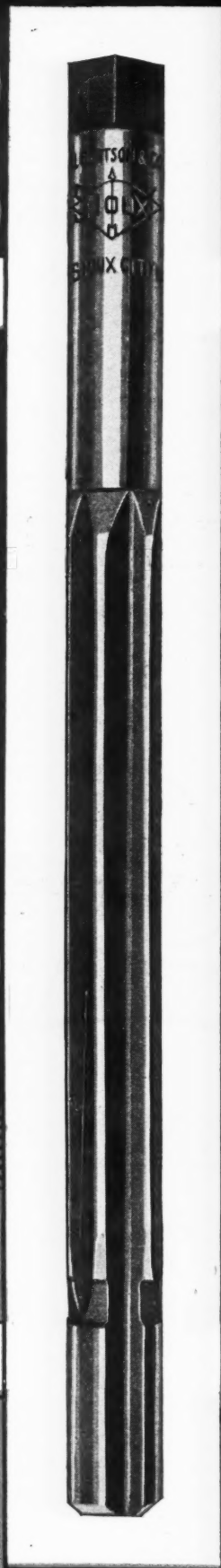
Cleveland
Los Angeles

Minneapolis
New Orleans

Philadelphia
Pittsburgh

Salt Lake City
St. Louis

Executive Offices and Factories: Passaic, N. J.



VALVE STEM GUIDE REAMERS

The "Oversized"—

is especially designed for reaming out worn valve guide holes for oversized valve stems. Its pilot guides the reamer and prevents it from following the worn part of the hole. Made of highest grade tool steel, heat treated and ground with absolute accuracy, it makes a quick, sharp, smooth cut. Keeps its fine edges for a long time and can be resharpened without affecting its size—an exceptional feature that greatly increases its life and usefulness.

Made in any size. Each size plainly marked for convenient use.

The "Standard" Size—

was put on the market to meet the demand for a thorough and efficient method of cleaning out valve stem guide holes *that do not require refitting with oversized valve stems.* With this "Standard size" a good thorough clean job is assured with positively no chance of increasing the size of the guide hole—thus completely overcoming the difficulties of the methods used heretofore for this job. Can be resharpened without affecting size. Made in any size.

YOUR JOBBER SELLS THEM

ALBERTSON & CO.
SIOUX CITY · IOWA



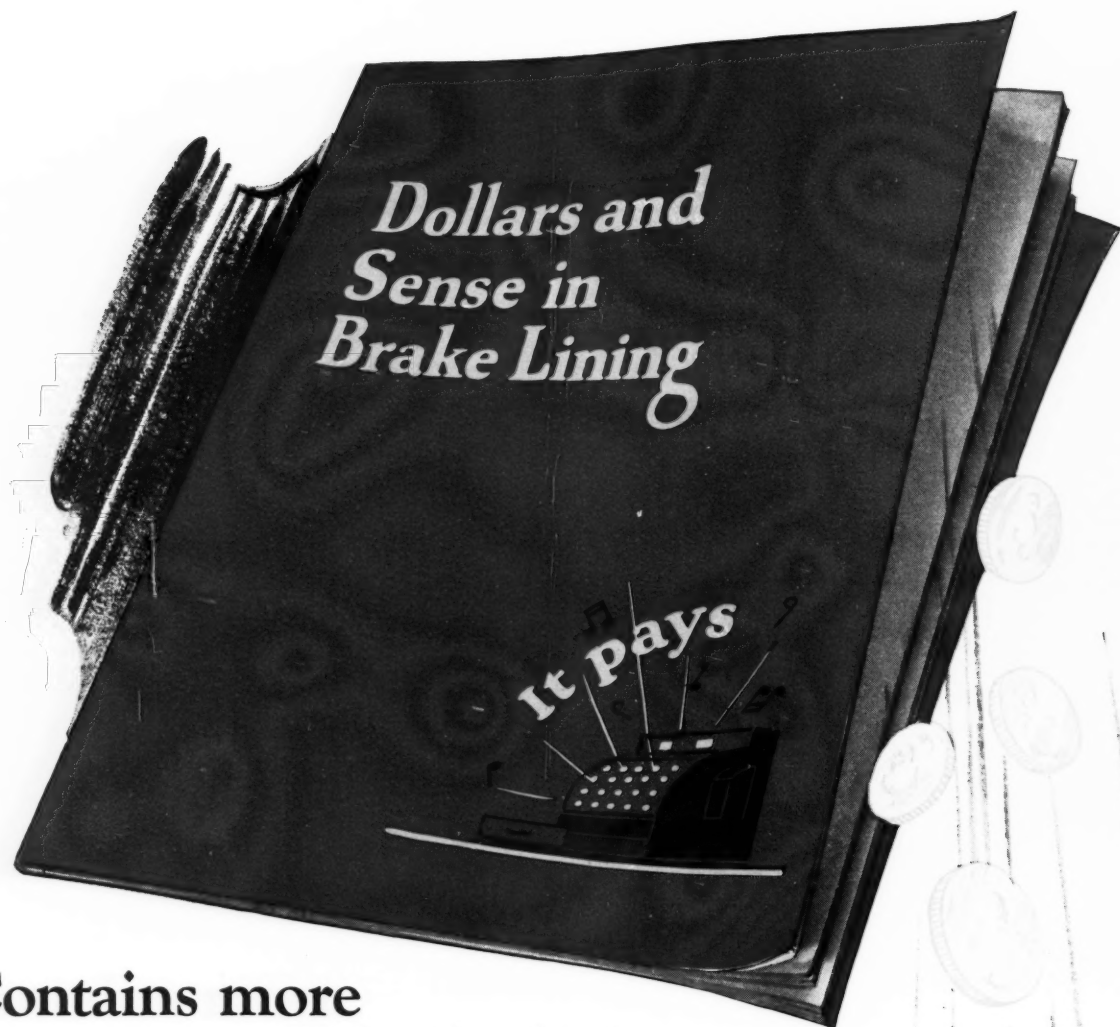
Dollars and Sense in Brake Lining

It pays



(over)

A profit getter —



**Contains more
ways to sell brake lining
than you ever thought possible**

All have been tried out. All have proved successful. Some of our dealers have doubled their business by using methods described in this book.

Whether you sell brake lining over the counter or in a re-lining job, this book will be of tremendous value to you. As far as we know it is the most comprehensive ever turned out. Write for it now (under your letterhead).

Write to

JOHNS-MANVILLE

JOHNS-MANVILLE INC., 291 MADISON AVENUE AT 6th STREET, NEW YORK CITY
Branches in 63 Large Cities For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

**ASBESTOS BRAKE LINING
CLUTCH FACINGS, PACKINGS, ETC.**

When Time Is Money—

Here's Shop Equipment That Saves Them Both



Model H.60

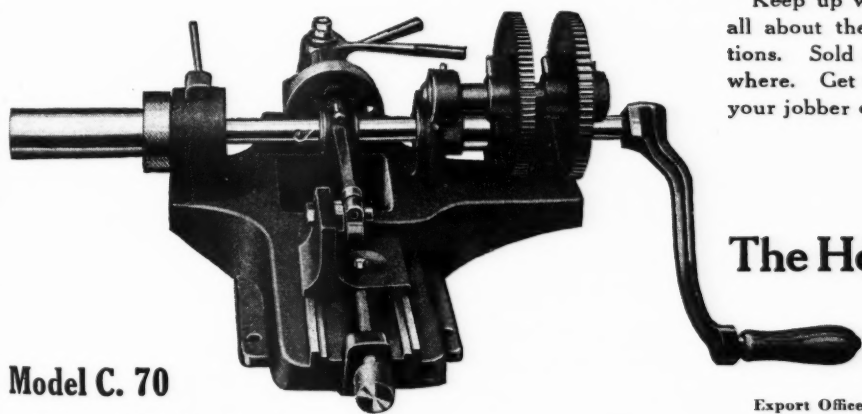
The machine above is the model H.60 Hempy-Cooper Universal Connecting Rod Babbitting Jig. Equipped with mandrel for casting an oil groove into bearings. Change parts from one type rod in less than 2 minutes. Water cooled. Price \$60.00.

Don't mark time on that rush job while another shop rebabbitts the connecting rods—and takes half your profits. Do the whole job yourself with Hempy-Cooper Connecting Rod Equipment. Consists of two machines that make new rods out of old ones at the rate that is certain to make you handsome profits. Lower your labor cost. Speed up your service. Greater satisfaction for your customers. Bigger profits for you.

One machine (Model H.60 Babbitting Jig) casts babbitt bearings into rods of makes of cars using "cast-in," "set-in" or "shell" bearings. The other machine (Model C.70) then bores and fillets the bearings. Accurate to a thousandth part of an inch. Both machines are practical, easily operated and very speedy.

Call Your Jobber or Write Us

Keep up with the march of progress. Learn all about these two new money-making inventions. Sold through high class jobbers everywhere. Get full information, prices, etc., from your jobber or write today for our Free Catalog.



Model C. 70

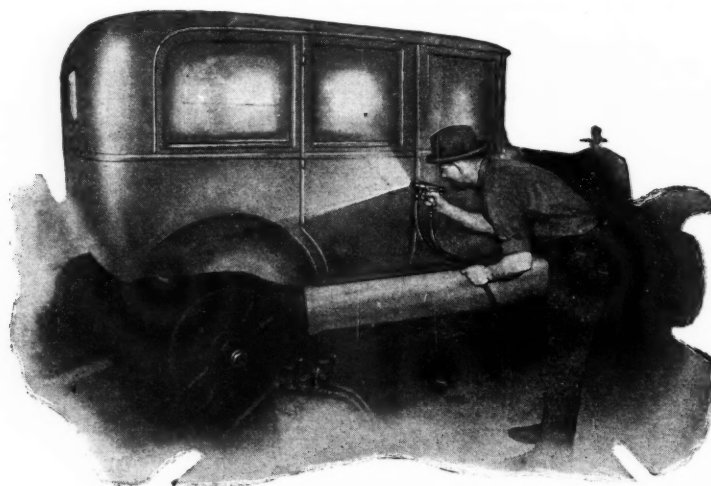
This machine bores and fillets connecting rod bearings. Scientifically correct and accurate. Operated either by electric drill or hand power. Equipped with famous patented helix screw feed. Price \$160.00. This price includes a fine micrometer.

The Hempy-Cooper Mfg. Co.
412 Archibald Ave.
Kansas City, Mo.

Export Office, Stevens & Co., 375 Broadway, New York City

HEMPY-COOPER

Rebabbitting Appliances

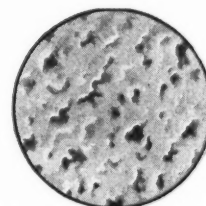


Every Refinish *Proofed* Against Failure!

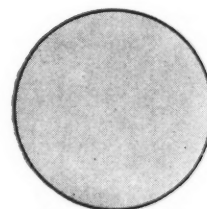
CHECKING, peeling and refinishing failures in general are usually traced to this one cause—the bare metal is alive with rust germs and paint remover. They remain in the *pores* of the metal after a body is apparently clean—then attack when the finish is applied.

Car manufacturers faced this menace to their original finishes; then it was overcome with Deoxidine. The bare metal is chemically cleaned with Deoxidine, then washed with water, dried and given the finish—proofed against failure. Over 90% of the car manufacturers prepare their bodies this way.

In the same way refinishers can insure success. The cost of Deoxidine is slight. In fact, it is an economy. Use it on your next job. Get the generous test bottle now. There is enough to prepare one car for the finish. Fill in the coupon.



Section of a finish 3 months old. The body was not properly prepared. Note how the rust is breaking thru.



A finish on a Deoxidine prepared surface after 3 months. Rust germs and paint remover are dead. A smooth, durable finish.

American Chemical Paint Company

Detroit Offices and Warehouse
137 Woodbridge St., E.

General Offices and Factory
Ambler, Penna.

Canadian Factory
Windsor, Ont.

Protect the Paint That Protects Your Product

TRADE MARK
DEOXIDINE
REG U S PAT OFFICE



free

American Chemical Paint Co.
Ambler, Pa.

Without obligating me, please send the free test bottle of Deoxidine.

Name.....

Address.....

features that sell
the new Chevrolet

YOU can tell a good automobile franchise by the money it makes.

Volume sales and a rapid turnover are the things that bring the largest profits to any business. Chevrolet's quality at low cost helps these cars to sell quickly in constantly increasing volume.

That is why Chevrolet dealers place a high value on the Chevrolet franchise.

CHEVROLET MOTOR COMPANY, DETROIT, MICH.
DIVISION OF GENERAL MOTORS CORPORATION

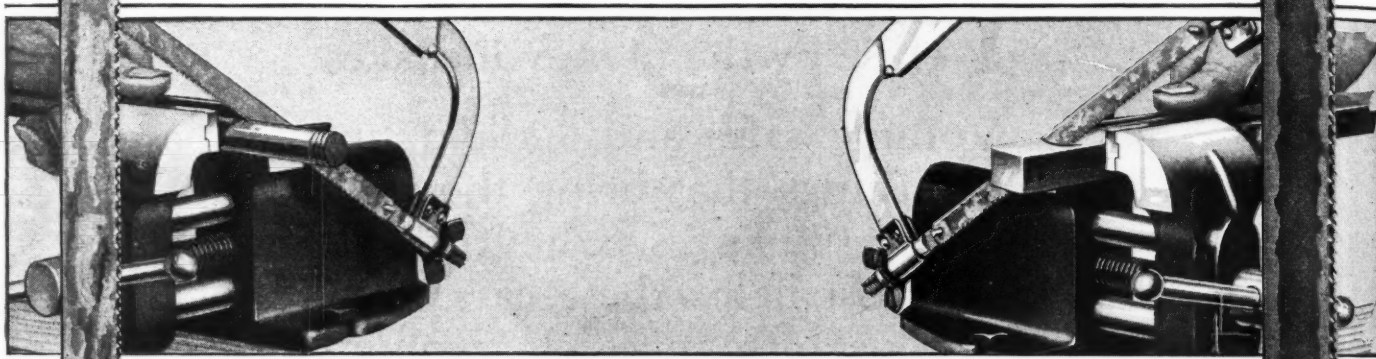


for Economical Transportation

QUALITY AT LOW COST

Are you using the right kind of HACK SAW BLADES?

THERE are Goodell-Pratt blades made for general all-around work, blades for jobs where there is severe twisting and side strains, blades for iron and steel, blades for brass or pipe, blades for soft metals, blades for thin steel sheets or tubing. Are you using the right kind of blades? Read this advertisement and find out.



No. 888

ALL-HARD Hack Saw Blades

Made from a high grade of hot rolled sheet steel .025 inch thick. Cut so that the length of blade runs with the grain. Teeth are, cut, sharpened and set by a special process for speed in cutting. Hardened and tempered by another process which assures uniformity and long life.

These all-hard blades are for general work and are offered in lengths from 8 to 12 inches.

Pick the right Goodell-Pratt blade for the metal to be cut

For cutting iron and steel rods or bars, use blades with 14 teeth to the inch.
For cutting brass, tubing or pipe, use blades with 20 teeth to the inch.
For soft metals or light tubing, use blades with 24 teeth to the inch.
For thin steel sheets or tubing, use blades with 32 teeth to the inch.

Interesting catalog FREE

The Goodell-Pratt Catalog shows all the Goodell-Pratt hack saw blades, as well as frames and all the other 1500 Good Tools—many made especially for motor repair work. Write for a copy. It's free to you.

No. 777

FLEXIBLE Hack Saw Blades

These blades are for cutting under difficult conditions. Made to withstand severe twists and side strains without snapping.

Made from best hot rolled sheet steel with hardened teeth and back, *but with soft centers for flexibility*. The result is a fast-cutting, long-life blade that will stand up under severe strains.

Offered in lengths from 8 to 12 inches.

GOODELL-PRATT CO. *Toolsmiths* GREENFIELD, MASS.

Makers of Mr. Punch

GOODELL-PRATT

1500 GOOD TOOLS

Straight Talk to Automobile Men on Radio

HOW would you like to sell a radio set so exact in its operation that when your customer comes in and says "Let's hear WGN" you say "Dial 31 and pull the switch!"?

That's Day-Fan.

How would you like to have your customer say "Can you cut out a big nearby station and bring in one far away?" and be able to do it, every time, with either a single or a three dial control set?

That's Day-Fan.

How would you like to have your customer say "Let's test it for tone quality" and then vary for his admiration from the high silver flute to the deep organ bass?

That's Day-Fan.

How would you like to have half a dozen more people come within a week saying "I heard that set you sold — let me look over the models."?

That's Day-Fan.

How would you like to be able to meet all your trade wants, in range of models, in low price, in beauty of cabinet and beauty of sound, in selectivity, in volume, in

distance, in every newest advance in radio, and have no come-backs with trouble to fix?

That's Day-Fan.

How would it seem to be the only dealer in your district selling these remarkable sets? To be protected on price as well as territory? To be helped by powerful advertising in newspapers and magazines?

That's Day-Fan.

How would it seem to be building a radio business on a sound and solid foundation, with a proven and reliable company behind you, protecting you and protecting the public with service and highest quality?

That's Day-Fan.

Write, phone or wire for name of distributor controlling your territory if you can qualify for the valuable Day-Fan franchise. Act fast. Several million dollars' worth sold in last year's short season on performance. The new line is even better—thanks to radio progress.

This business is stabilized at last.

That's Day-Fan.



THE DAYTON FAN & MOTOR CO.
DEPT. M. A., DAYTON, OHIO

For More Than 36 Years Manufacturers of High Grade Electrical Apparatus



Day-Fan

RADIO

Rickenbacker

A • CAR • WORTHY • OF • ITS • NAME

Announcing— Sensational Price Reductions and New Models in the “Vertical-8-Superfine” \$200!—\$400!—\$600!

PRICES OF NEW MODELS are as follows:

	Old Price	Reduction	New Price
Phaeton	\$2195	\$200	\$1995
Brougham	\$2395	\$400	\$1995
3-Pass. Coupe, New Body Design			\$2095
Sedan	\$2795	\$600	\$2195

HERE IS the world's greatest buy in a motor car of the finest type.

REMEMBER, THIS CHASSIS is identical in every respect, with that in which Captain Rickenbacker paced the 500-mile race on Indianapolis Speedway, Decoration Day, at 87 miles per hour.

HERE IS power plus. Here is super-speed — and wonderful sweetness.

AMAZING ACCELERATION—matchless hill - ability — and equally rapid, equally smooth deceleration, thanks to the splendid 4-wheel brakes.

AND YET — this Rickenbacker “Vertical-8-Superfine” is priced \$2000 to \$3000 less than the only other “8” that compares with it in quality or performance.

DRIVE THIS “Vertical-8-Superfine” yourself — experience a “new thrill” in motoring.

Prices are f. o. b. factory—plus war tax

Rickenbacker Motor Company
Detroit, Michigan



Triple Your Piston Sales with the New Improved *DELUXE*

Our 14 points of superiority -
Eliminate Competition



EVERY MOTOR NEEDS THEM

There is nothing to take its place. The New Improved DELUXE is the easiest piston to sell in every territory because it is scientifically designed for every motor, is light weight, keeps cool, will not pump oil, is the only piston built that will stay perfectly round and will outlast any make of piston.

*Now Centrally Located to Give You Service
Write today for our new catalog*

FULLY PATENTED
SCIENTIFICALLY HEAT TREATED
GUARANTEED

Carefully Packed in Attractive Cartons—
Shipped Promptly

See the complete story of the New Improved *DELUXE* in our new 24-page catalog.

The **DELUXE PRODUCTS CORPORATION**

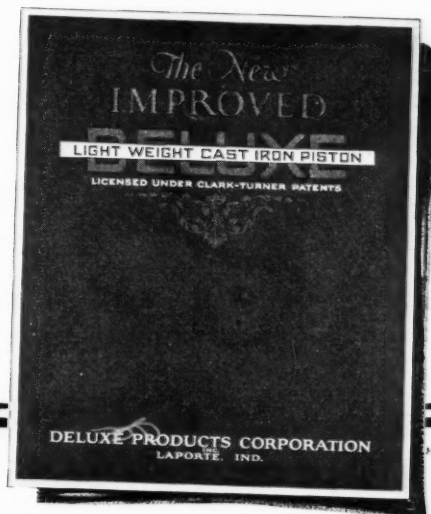
1235 Lake St.

LAPORTE, INDIANA

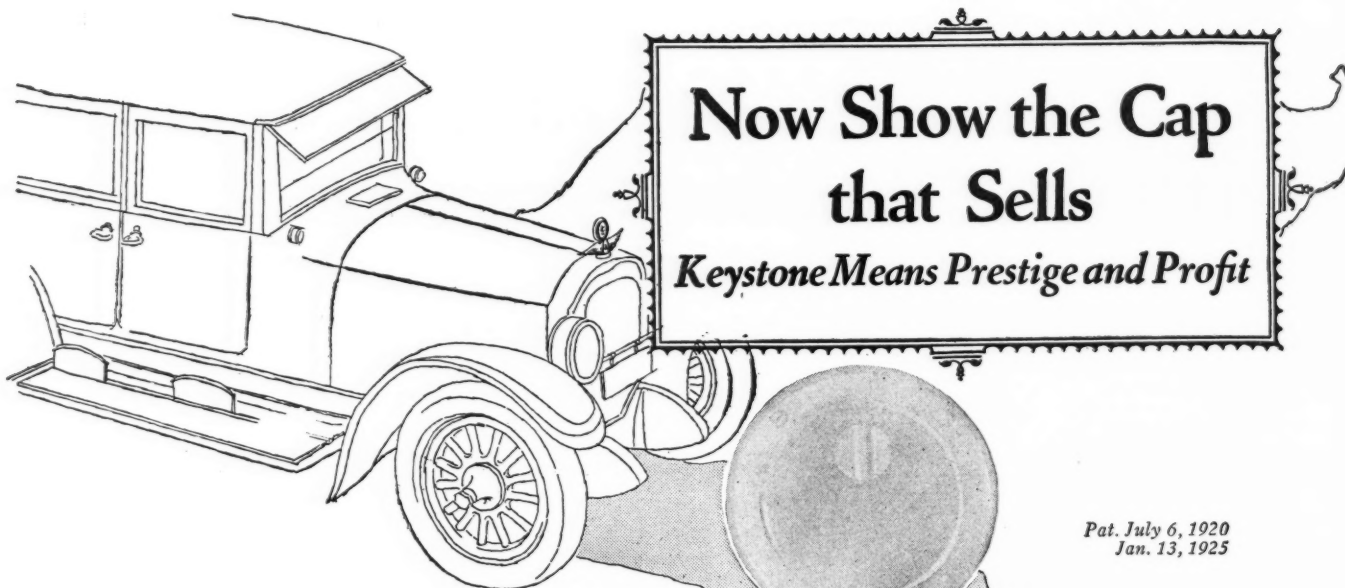
THE NEW IMPROVED

DELUXE

LIGHT WEIGHT CAST IRON PISTON
LICENSED UNDER CLARK-TURNER PATENTS



Nearly 2 Million DELUXE Pistons Sold Throughout the World



Pat. July 6, 1920
Jan. 13, 1925

THERE are dozens of Radiator Caps, good, bad and indifferent. But only one **KEYSTONE**.

Jobbers and Dealers all over the country are shortening their line of Caps, many selling only the Eagle and Ball-end, Bar-types bearing the **KEYSTONE** mark.

Owners want **KEYSTONE CAPS**, for reasons of their time proven mechanical features. Dealers know that once mounted, every Cap makes a friend.

KEYSTONE CAPS are not only beautiful in design and finish, but are theft-proof and absolutely rust-proof. Mechanics know they will not stick or "freeze."

In short, wherever **KEYSTONE CAPS** are shown they are *sold*, not carried in stock for an indefinite period.

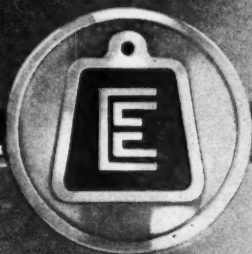
KEYSTONE CAPS will mean prestige and profit for you. Ask your jobber or write us.

THE NORLIPP COMPANY

568 West Congress St., Chicago

KEYSTONE
SELF-LOCKING
RADIATOR CAPS





Known as a Sign of Quality

BOTH trade and public recognize the Eaton mark as a sign of quality. Wherever you go the finer cars are Eaton Bumper equipped. There are sound reasons.

Eaton custom-made attachments make each Eaton Bumper an integral part of the car. They fit and hold.

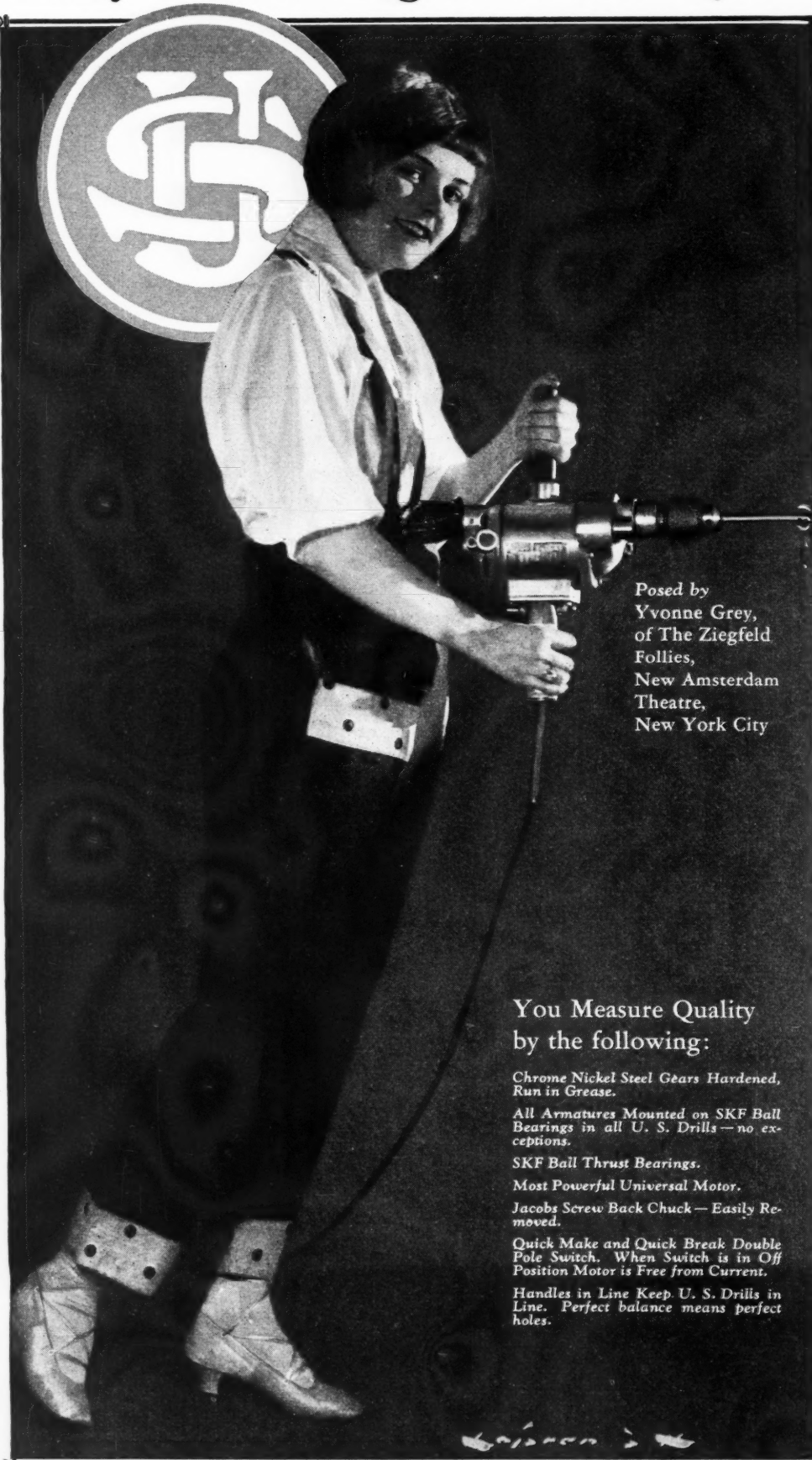
And *inherent* in Eaton design is maximum protection and beauty. Eaton Bumper simplicity yields utmost strength and symmetry.

From \$11 to \$40

THE EATON AXLE & SPRING COMPANY
Cleveland, Ohio

EATON
BUMPERS

They Make Light Work of Heavy Jobs



Posed by
Yvonne Grey,
of The Ziegfeld
Follies,
New Amsterdam
Theatre,
New York City

You Measure Quality by the following:

Chrome Nickel Steel Gears Hardened,
Run in Grease.

All Armatures Mounted on SKF Ball
Bearings in all U. S. Drills — no ex-
ceptions.

SKF Ball Thrust Bearings.

Most Powerful Universal Motor.

Jacobs Screw Back Chuck — Easily Re-
moved.

Quick Make and Quick Break Double
Pole Switch. When Switch is in Off
Position Motor is Free from Current.

Handles in Line Keep U. S. Drills in
Line. Perfect balance means perfect
holes.

UNITED STATES Portable Electric DRILLS



THE stage electrician was making one of those quick repairs for which his craft is famous when a show girl standing near him said, "Say, Jim, I'll bet I can run that thing-a-ma-jig as well as you can."

"All right, Kid, if you make good, I'll make you my helper," returned Jim, handing the drill to the girl and crouching down beside her with an encouraging grin.

And right there the electrician learned something about both women and drills.

Gentle and easy to handle but speedy and strong to the finish. Can be driven successfully by any woman.

Sounds like the description of a thoroughbred, doesn't it?

Any U. S. Drill answers to that description on any job anywhere.

It's the drill that has eliminated "shop fatigue" in thousands of garages, factories, metal working plants, and on building construction and maintenance jobs everywhere. It's the drill for you and your men.

COMPLETE STOCKS CARRIED IN ALL SERVICE STATIONS

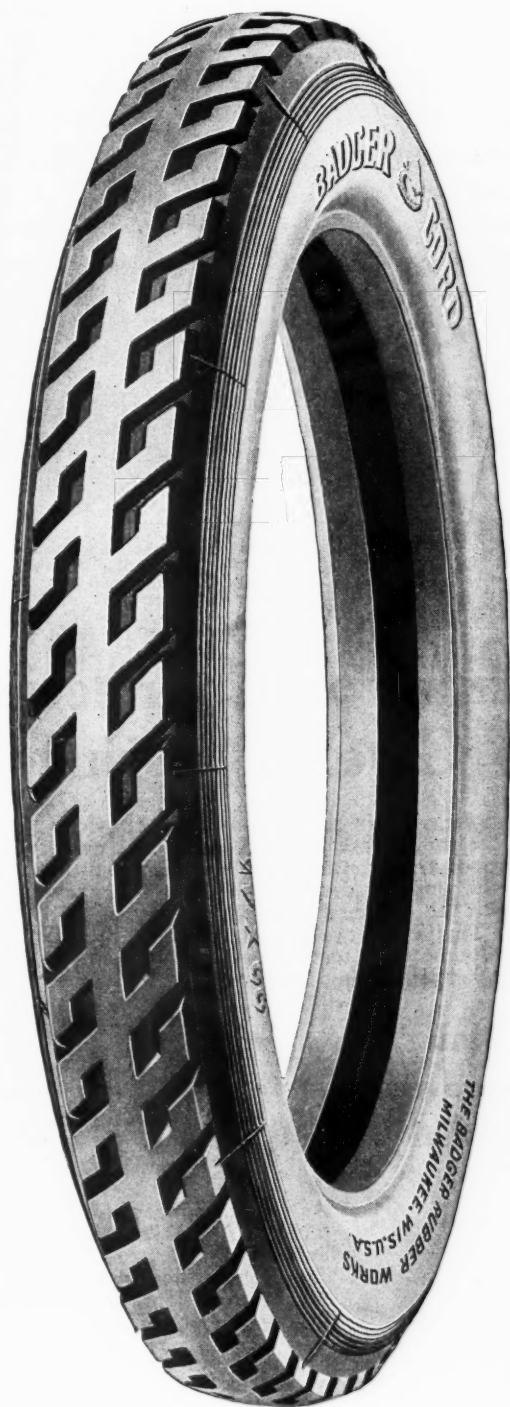
Boston
Buffalo
Chicago
Cleveland

Dallas
Detroit
Houston
Kansas City
Los Angeles
Minneapolis
New York
Philadelphia
Pittsburg
St. Louis
Toledo
San Francisco

"The Good Mechanic Knows"

THE UNITED STATES ELECTRICAL TOOL CO. CINCINNATI, OHIO, U. S. A.
Oldest Builder of Portable Electric Drills in the World

The Message of BADGER TIRES



A dependable line of tires is now a necessary part of the stock of any Hardware or Automotive Accessory Dealer.

Any passenger car, speed wagon, truck or bus in his community, represents a possible sale of one or more tires.

And there is a greater profit in tires than in any other Auto Accessories line now on the market.

BADGER TIRES are distributed to the Dealer trade through representative Jobbers throughout the country.

Complete in types and sizes to meet all classes of service, it is considered the best all-round proposition for quality, service, and profit that has ever been offered the Trade.

Inquiries solicited from accredited Jobbers. Dealers supplied through the Jobbing Trade.

THE BADGER RUBBER WORKS
MILWAUKEE, WISCONSIN — U. S. A.

"The Most Profitable Tool in the Shop"

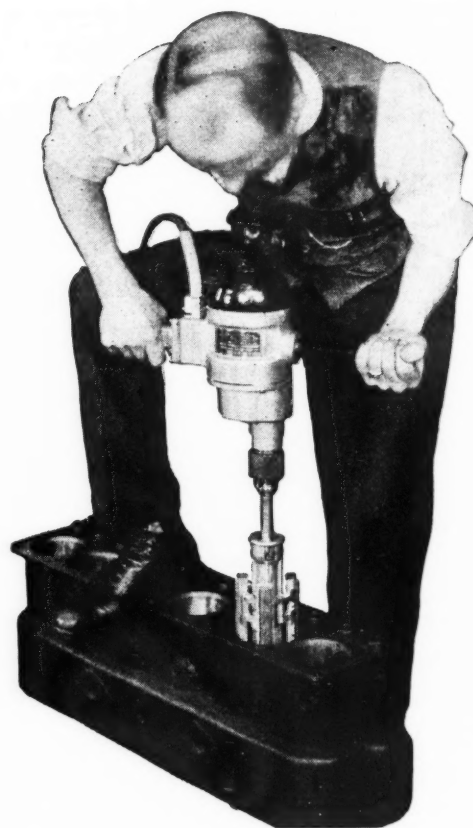
Cylinder honing, on a flat charge basis, is the most profitable operation in the shop. Thousands of garages, service stations and repair shops have found it doubly profitable with the Hall Cylinder Hone. Here's why.

You can fit new rings to Hall-honed cylinders and know the job won't come back on you showing oil passing, compression loss and crank-case dilution. That's because the Hall Hone, with its four steel-jacketed stones actuated by a SINGLE spring, removes both the oval and taper condition. Hall-honed cylinders mean round rings in round holes; ordinary honed cylinders mean round rings in oval holes with oil passing, compression loss and trouble for you.

Hall Cylinder Hone



The Hall Patented Principle is recognized by Buick, Chevrolet, Durant, Four-Wheel-Drive Truck, General Motors, Oldsmobile, Pierce-Arrow, Rickenbacker, Rolls-Royce, Velie, Willys-Overland, and Yellow Sleeve Valve Engine Works.



You can use the Hall Hone with your present half-inch drill. Above is shown the Hall Hone in actual use, driven by half-inch Van Dorn drill.

No Links or Connections to Give or Spring

Hall Hone application is solid from cone to stone carrier, assuring precision to the thousandth. Placed in an oval cylinder and the cones tightened, two of the stones are pushed against the cylinder wall at the point of the smallest diameter. As the hone revolves, two stones, alternating with the other two, do all the cutting until the hole is perfectly round. That's because all four stones are under equal pressure at all times. Competitive tests by auto manufacturers have shown the Hall to be the fastest cutting Hone made.

Hall
Improved
Model

\$35 at
your
Jobber's

Ask your jobber for the Hall Hone. There's no substitute for the Hall Patented Principle, so if your jobber can't supply you, accept no other but write direct to us for complete information giving jobber's name.

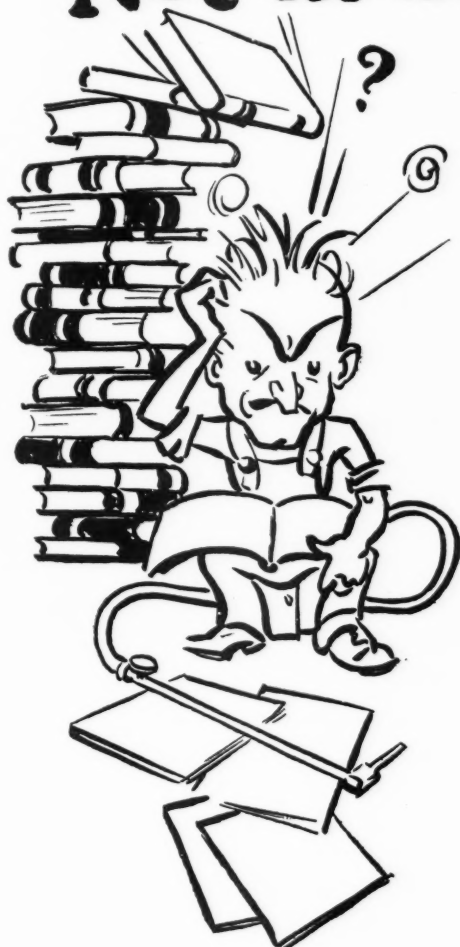
**The Hall
Mfg. Company**

507 Hall Bldg., 1600-06 Woodland Ave.

Toledo, Ohio

Spring Pressure or Solid Pressure in one Hone.

Not in books or magazines



YOU MAY NOT always find in the Linde books and magazines the help you need in oxy-acetylene welding and cutting. At such times you may need a trained Service Operator to help locate the cause of trouble or to demonstrate the proper methods. Service Operators are a part of Linde Process Service.

Automobile repair men know the helpfulness of Linde Service

All over the country, in small garages and in large ones, the repair men testify to the helpfulness of Linde Service. Many of these men own and use the Linde "Step by Step" books and get the help they need from them. Some, however, have asked for Linde Service and Service Operators have been sent to help them in their welding work. One Service Operator went to a small garage in a little town, gave the garage man some instructions on a certain application of welding. By following the instructions he had received, the proprietor of this garage became a competent welder on such applications and added a new class of work to his shop.

Linde Process Service is free to every Linde user for the asking. Talk with any Linde representative or District Office about it.

THE LINDE AIR PRODUCTS COMPANY

General Offices: Carbide & Carbon Building
30 East 42d Street, New York

37 PLANTS — 85 WAREHOUSES
22 DISTRICT SALES OFFICES

LINDE OXYGEN

YOU CAN DEPEND ON THE LINDE COMPANY

THIS free book gives ideas for making more money ... to every tire-dealer



Are the tire-dealers of America making *enough money*? What is *your own experience*? In this unpretentious little book are some astonishing facts on the subject. And some *good hard-headed, practical ideas for making more money* selling tires. There is a free copy of the book for every tire-dealer who will write for it . . right now.

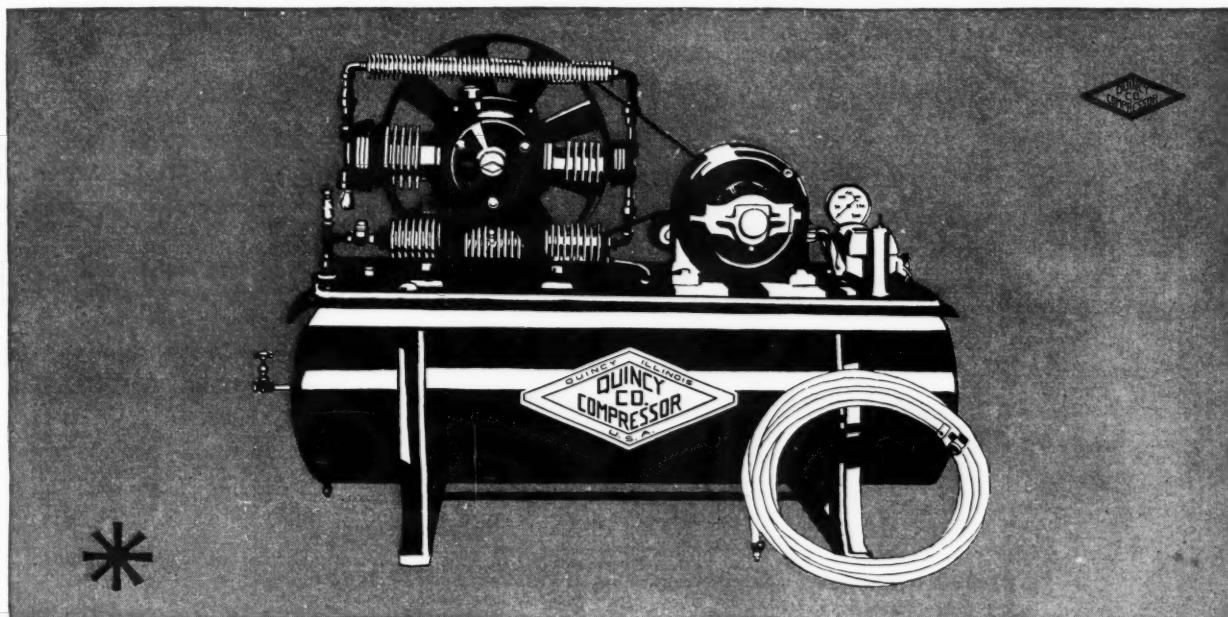
HAVE you got your copy yet? It's worth sending for. You'll find it contains no fancy theories . . no hokum . . no bunk. We sent experienced tire-men out into the field to find out *exactly* what was what. *And they found out*. They also brought back *business-building, money-making ideas* that any tire-dealer can use with profit. It's bed-rock stuff, every word of it.

WON'T take you long to read, either. There's no "fine writing" from cover to cover. No words or sentences wasted. It was written for busy tire-men to read. You can go through the whole book, and get all the meat out of it, in less than 20 minutes. And there's plenty of meat . . real ideas . . for any tire-dealer *who will send for the book now, and read it*.



Address: EMPIRE TIRE and RUBBER COMPANY
Trenton, New Jersey

Do something about it



If you now operate an antique, troublesome compressor; or if you have no compressor at all and need one. . . why *not do something about it?* You may be losing enough time, money and business every day to pay for a new compressor in a few months. Write to us. Or fill out and mail this coupon. Come and see us. Ask our representative to call. Or talk to your jobber. . . But let us tell you, someway, somehow, what we know to be true about our compressors. You may be able to install one of our new

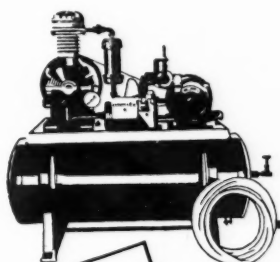
dependable compressors with an ease and quickness that will surprise you. They are made to meet modern conditions. They are sturdy and silent. Service is first-class. And prices are reasonable and right.

Quincy Compressor Co.

Name formerly

Wall Pump and Compressor Company
217 Maine St., Quincy, Ill., U. S. A.

Quincy Silent Air Master. A Complete Automatic Unit



Model G-16

Model F-1
Quincy Single Stage Unit. Completely Automatic

Quincy Invincible Air and Water Tower



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Model B. Quincy Single Stage Outfit



Quincy Compressor Co.,
217 Maine St., Quincy, Ill.

Please send me further information about the equipment I have checked.

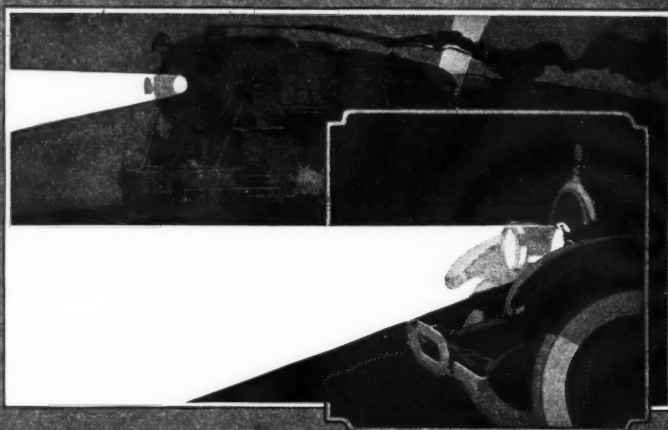
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Street.....

City.....

State.....

"A LAMP FOR EVERY AUTOMOTIVE NEED"



Through the Blackest Night at Express Train Speed With Perfect Safety

WHAT would the locomotive engineer do without the guiding light from his powerful headlamp? He would get along somehow but the chances of accident would be trebled at least.

What about the motor car driver who parallels the speed of the fast express under driving conditions far more hazardous? With no rigid track to guide him and oncoming cars bobbing into sight at every turn, not to speak of the hundreds of other dangers of the night, doesn't he too need a powerful, penetrating bright light of safety.

Now he can have it by the simple expedient of having Victor Brown-Universal Reflectors installed in his present headlamps.



The danger of glare is then wholly removed because with this reflector-control of the light rays all the light is thrown low and wide and flat on the road out of the eyes of approaching drivers. This reflector-control allows the use of plain glass lenses which makes legal and safe the full power of the bulbs, intensified instead of diffused.

There is money for the dealer selling this new headlighting service—Victor Brown-Universal Reflectors for replacement in car owner's present headlamps. Victor Headlamps complete (equipped with these reflectors) when new headlamps are needed.

Get in touch with your jobber or us for particulars.

Victor
BROWN-UNIVERSAL
REFLECTORS

"MAKE ANY HEADLAMP LEGAL ANYWHERE"



VICTOR No. 100 SPOTLAMP

"Pathfinder" by name—an all brass, heavily nicked, double shell, four-inch quality spotlamp. Holds its place in the spotlight of public favor through sheer merit.

VICTOR No. 36
STOPLAMP



"Cardinal" is the name of this very popular combination stop and tail lamp. Fits all cars and adds to their beauty. A popular number in the Victor Line of Stoplamps.



VICTOR No. 47-G
PARKING LAMP

Appropriately called the "Gloworm." A little three-jeweled beauty. Extra jewel in side is green. Sells on sight and suggestion.



THE name Victor on an automotive lighting device guarantees that it is scientifically correct, that it performs the function for which it is intended in a thoroughly satisfactory manner, that it is accurate in form and finish, that it is worthy of the name it bears. An eighty-year-old reputation which we jealously guard is the buyer's guide and guarantee, and the dealer's assurance of a quality product distributed on an equitable basis.

"The LINE FOR EVERY AUTOMOTIVE DEALER"

The CINCINNATI VICTOR CO.

716 Reading Road
CINCINNATI, OHIO

entirely Automatic



Full automatic spark control, Ford spark lever eliminated, easy driving, more pep and power, greater flexibility of the engine, quick installation and easy timing—Type 600 is easy to sell because it provides so many advantages.

Price \$12.75 (\$17.50 in Canada)

AMERICAN BOSCH MAGNETO CORP., Springfield, Mass.

Branches: New York, Chicago, Detroit, San Francisco



TYPE 600
BOSCH
Ignition

for



FORDS



The granite hard insulator, manganese nickel electrodes, gas tight construction and rugged wearing qualities of the Bosch Spark Plug make it long-lived and dependable. It's an aristocrat through and through. Sell the Bosch Spark Plug—the RED plug.

Ford Size 75c Regulars \$1.00

AMERICAN BOSCH MAGNETO CORP., Springfield, Mass.
Branches: New York, Chicago, Detroit, San Francisco



BOSCH PLUGS

Concentrate on a Popular Quality Line of Tires

The Fisk Balloon Tire

For low pressure comfort and high pressure wear

The Fisk Cord Tire

The tire of extra quality which is so widely used.

The Fisk Red-Top Tire (Cord and Fabric)

The world's most famous extra-service tire.

The tire with the extra ply and red rubber tread.

The one tire which has no substitute.

The Fisk Transportation Cord Tire

One of the most successful heavy duty cords ever built.

The Fisk Premier Cord Tire

Tires of standard quality to meet low price competition.

Complete line of red and grey tubes

This great line of tires, conveniently supplied through 145 Fisk Wholesale Branches and backed by the Fisk policy of fair dealing, has built for many a tire dealer a good profitable business.

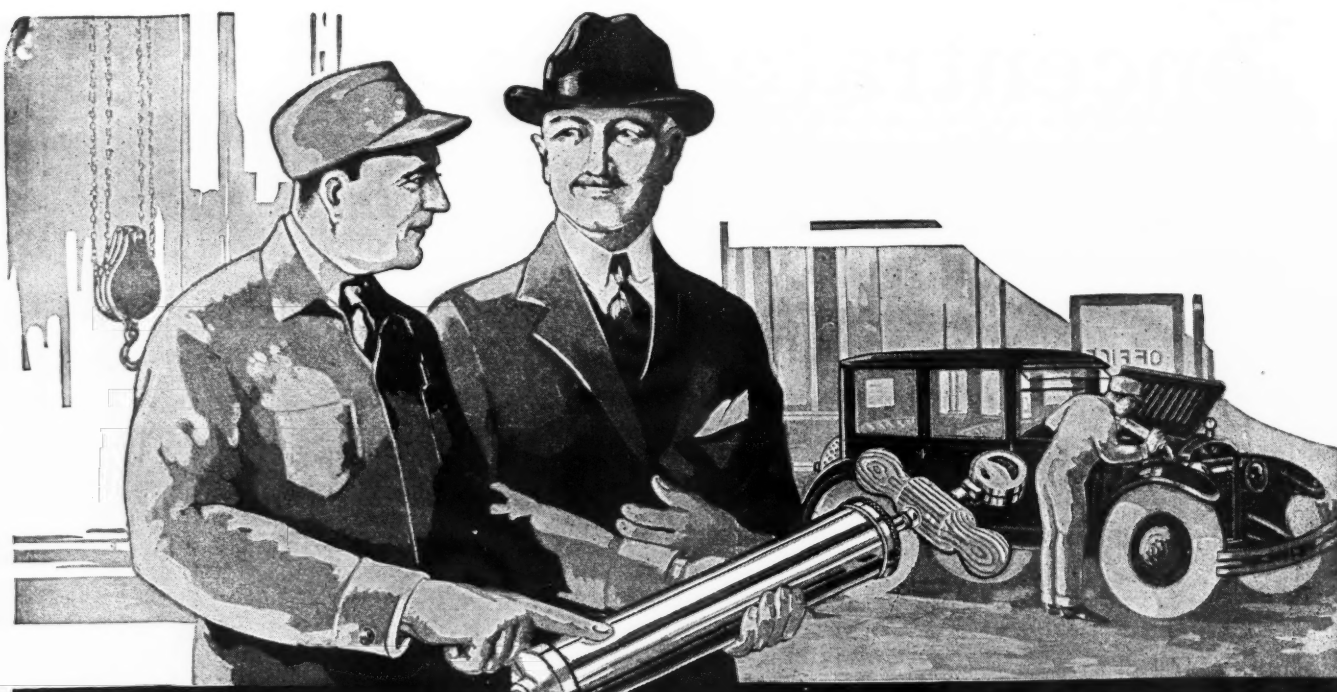
Considering all these advantages, why should any dealer ever want to handle any other line?

The Fisk Tire Company, Inc.
Chicopee Falls, Mass.



Trade Mark Reg. U. S. Pat. Off.

Time to Re-tire
Get a Fisk



"The Best \$13.50 I ever Invested!"

"YES SIR! There's the thing that's building up my business. Lots of my other customers are just like you—surprised and pleased at their small repair bills. With this HAMMETT MOTOR TESTER we can practically X-Ray the motor—locating the trouble before you can say 'Jack Robinson', and have the job done while we'd be getting ready to do it under the old by-guess-and-b'gosh method. By saving time in the shop, we save our customers money—and that's what it takes to build business. I wouldn't do without the HAMMETT MOTOR TESTER for ten times its cost!"

Your Shop Needs It Too!

The HAMMETT MOTOR TESTER will save you time and money, increase efficiency in your shop, speed up your service and bring you new friends, just as it is doing in other successful garages all over the country.

With it you can test valves in a jiffy, hear piston slaps and tell just where they are, find loose wrist pins, test main bearings, locate knocks, find out if connecting rods are loose—in short, you can "X-Ray" the motor, tell your customer just what is wrong, how long it will take to fix it, and the cost.

Brings New Business

Garage owners using the HAMMETT MOTOR TESTER report a rapid and substantial increase in their business. This is easy to understand. When a shop is consistently giving better service and saving its customers money, the word soon gets about. Satisfied customers tell their friends, and these tell others, and so it goes.

There is no novelty about the HAMMETT MOTOR TESTER. It is a practical piece of equipment, scientifically designed to do the work—and it does it.

Your regular jobber can supply you with a

HAMMETT MOTOR TESTER

or, if he does not have it, send us his name and we'll see that you are supplied. Then you'll say, as others have said, "That's the best \$13.50 I ever invested."

HAMMETT MANUFACTURING CO. 13th and Oak Streets KANSAS CITY, MO.

Gabriel *Improved Balloon-Type* **Snubbers**

**On your trip, you *need*
Gabriel Snubbers.**

**They save you.
They save your
car ~~~ They
pay for them-
selves in the
first month**

*Write today for the liberal
Gabriel Sales Proposition.*

The Gabriel Snubber Manufacturing Company
1415 East 40th Street, Cleveland, Ohio
Toronto, Canada



Seals the head *TIGHT!*



**Increases
Efficiency**



Wherever Applied

There are so many uses for KEY Graphite Paste that it practically stands in a class by itself as a handy help around the shop.

Use it for gasket paste, battery terminals, hose connections, spark-plug threads, door squeaks, manifold paint, on spring leaves and all wearing points.

The coupon will bring you a generous FREE sample for trial.

KEY BOILER EQUIPMENT CO.
27TH AND McCASLAND AVE.
EAST ST. LOUIS, ILL.

Sample—FREE—

Key Boiler Equipment Co.
27th and McCasland Ave., East St. Louis, Ill.

Please send me without charge or obligation a sample of Key Graphite Paste.

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M.A. 7-16-25

For close gauge work on Drill Press Lathe and Tapping Machine

Throughout the industrial world, Jacobs chucks are "standard." Operate efficiently on the most powerful tools and the heaviest work. With the Toothed Sleeve and Key, drills, reamers and other tools are chucked quickly and accurately with one hand. Six sizes for General Drilling from $\frac{1}{4}$ in. to 1 in. capacity.

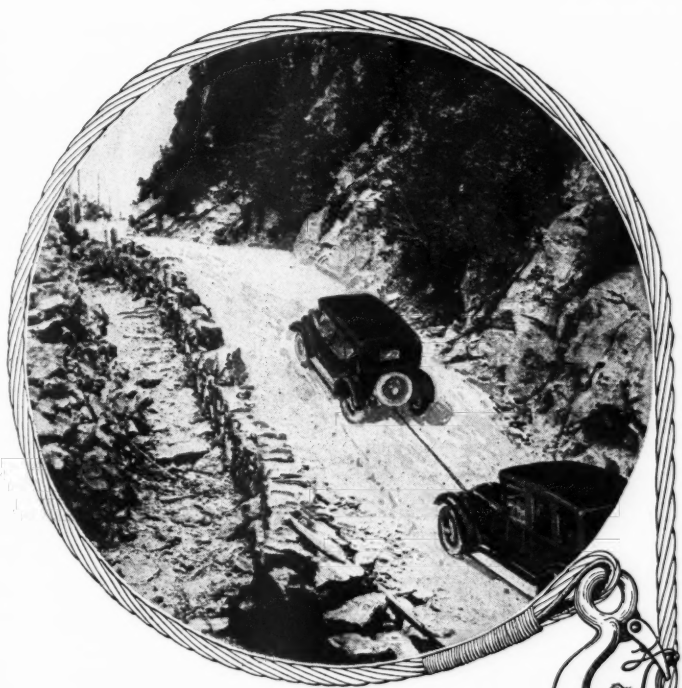
Jacobs Arbors for all standard makes of machine tools insure accuracy.

THE JACOBS MANUFACTURING CO.
Hartford, Conn.



*Your Jobber
stocks and
Sells Jacobs
Chucks and
arbors.*

**A
Jacobs
Chuck
For Every Purpose**



Tows 7000-lb. Limousine Up Mountain

It is conceded by autoists that Crawford Notch, the famous beauty spot of the White Mountains, is one of the severest tests encountered by tourists through New England. Mr. Robert Miller, of St. Louis, recently played good Samaritan to another tourist at Crawford Notch, thanks to Basline Autowline.

From the top of the Notch, Mr. Miller watched his chauffeur tow a disabled limousine from the very foot clear to the top, and then a half-mile beyond to the Crawford House garage.

Mr. Miller says: "I judge that the limousine my chauffeur towed weighed 7000 lbs. or more. This is certainly a sufficient test for 'Basline Autowline.' My chauffeur has since put the same line to severe tests in towing other cars, which would indicate that the line was not hurt by its first severe test."

BASLINE AUTOWLINE, the "Little Steel Rope with the Big Pull," is made of famous Yellow Strand Wire Rope. You can depend on it to pull you out of trouble every time. Fits under seat cushion.

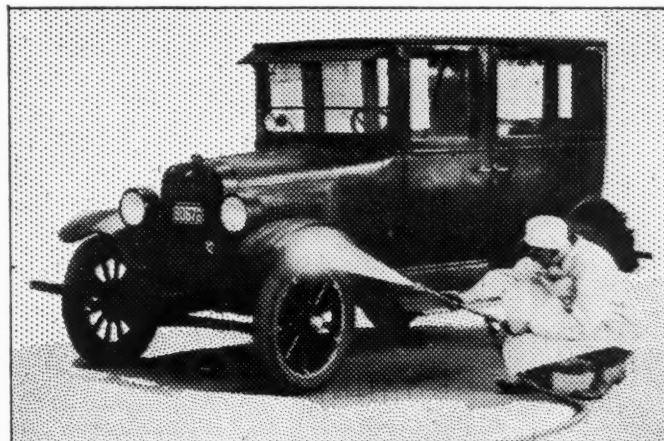
Money for Jobbers and Dealers:

Basline Autowline pays you a good profit, and sells well. Push it this season. Write for new Price List.

BRODERICK & BASCOM ROPE CO.
ST. LOUIS — NEW YORK



GR 193



Electric "SPEED-SPRA" AUTO WASHER

The fastest, most practical, and one of the most efficient car washing machines on the market. Washes cars so fast that motorists "Wait and Take" out their clean cars. Increase your washing profits! Install an electric "SPEED-SPRA" Auto Washer!

THE speed and efficiency of the electric "SPEED-SPRA" is remarkable. On the average, it requires less than 15 minutes for the actual work of washing a car.

The "Velvet-Spra" Gun delivers a broad, soft, soaking, penetrating spray which softens and removes dirt, dust, and grit. Impossible to injure the finest finish.

With its handle control, this spray is easily changed to a long, driving, cleansing spray for use on axles, springs, and under sides of fenders to remove caked and oil soaked dirt.

Each machine is equipped with two "Velvet-Spra" Guns, enabling you to run two wash racks or one wash rack with two men.

The simplicity of the "SPEED-SPRA," its noiselessness, low operating expense, and freedom from complications has been proved for a long time.

Jobbers! Salesmen! A genuine opportunity!

**Write for
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HAYES PUMP & PLANTER COMPANY,	
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This Established Service Offers More Profit for You

Burned out connecting rods rebuilt as good as new—with every attention to all the details that make for ease and economy in installation and long service in user's hands—that's the whole story of Watkins Rebabbed Rods—plus conveniently located factories that assure you 24 hour service on your work.

Here's What You Get in a Watkins Rebabbed Rod

Bearing metal to S. A. E., Specifications, tinned in,—accurately broached to size,—new bolts, nuts and shims when required. A rod that fits quick to the crank shaft, saves money and time for you.

WATKINS
Complete REBABBITING
SERVICE

Send Parts to Factory Nearest You for Quickest Service

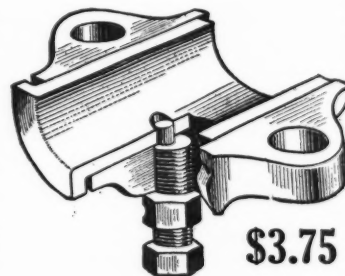
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Authorized Exclusively by Buick Motor Co.
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ANTICIPATE END-PLAY

and then prevent it!

Every Ford owner has the problem of crankshaft end-play—the cause of so many mechanical troubles. To this broad field the C-A ADJUSTABLE BEARING offers, not only an easy, convenient means of correcting end-play, but also does much to prevent its development by assuming half the thrust. In hundreds of cases the C-A ADJUSTABLE BEARING has been installed on new Fords and has paid for itself many times over.



\$3.75

Replacing the center main bearing cap, it is necessary only to drop the oil pan to install or adjust. It's a cure for the many evils of end-play: Dragging clutch, magneto out of line, chattering bands, scored cylinders, worn wrist pins, etc.

"KIND TO THE FINGERS"

That's what they say of the C-A HOOD HOOK FOR FORDS. Large, convenient grip—plenty of finger room. Set at an angle to prevent "skinned" knuckles. Can be substituted for regular hook in five minutes. Good looking—heavily nicked. Comes on attractive display card holding 12. Lists at 75c for set of two.

JOBBER, DEALERS—Write today for further information on our fast-selling products.

ADJUSTABLE BEARING COMPANY, INC.

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THE most complete Flat Rate information ever offered the trade—originally published in MOTOR AGE of April 30th, 1925—is now available in booklet form at 50 cents a copy.

277 Operations and 42 Cars are covered in this new manual. If you want the latest and best information on the subject, don't be without it. It only costs

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"WHITNEY"

SILENT HIGH MILEAGE CHAINS

Satisfied Customers Your Best Recommendation

"WHITNEY SILENT HIGH MILEAGE CHAINS" for timing and accessory shafts, make satisfied customers every time—largely because of their extraordinary mileage and trouble free service.

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507 John St. |
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Connecticut Auto Parts Co.
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THE WHITNEY MFG. CO.
HARTFORD Connecticut



The New **B & R BATTERY CAPACITY TESTER** \$24.00

A piece of electrical equipment for the SERVICE STATION

It will bring new business to your shop.

It will sell new batteries for you.

It will show the car owner AT ONCE just the condition of his battery.

It is easy to operate, indicating the exact condition of the battery under test, these readings being taken direct without reference to amperage or voltage.

**A PIECE OF EQUIPMENT THAT
WILL MAKE MONEY FOR
YOU FROM THE START**

Burton-Rogers Co.
26 Brighton Ave.,
Boston, Mass.,
U. S. A.

**PIN
THIS
TO YOUR
LETTER
HEAD AND
FULL DETAILS
WILL BE SENT YOU**

UNIVERSAL
TYPE
With Extra
Standard
Jaws
Price \$2.50



YOU CAN'T KID A "K-D" They're Wise to Every Make of Car!

What's your specialty—Ford, Hudson, Dodge, Studebaker?

It makes no difference to K-D. There's a type for every car. Just ask your dealer for the special jaws to fit the cars you service, snap them into the K-D Universal Frame, and you've got a tool that lifts valve springs as fast as a mechanic can move his hands. No bruised hands, no pinched fingers, no lost motion. K-D makes every valve-grinding job show a real profit by speeding up the toughest part of the job—lifting and replacing.

Where Else Will You Find These Features?

1. Jaws remain parallel throughout entire lift. No slipping, no binding.
2. Jaws lock automatically at any desired height, allowing operator free use of both hands. Released by patented thumb-latch.
3. Universal Type has two extra standard Jaws to fit most L. & T. Head Motors.
4. Pressed steel throughout. Parkerized against rust. Practically indestructible.

K-D MANUFACTURING COMPANY, Lancaster, Pa.

K-D PARALLEL JAWS
VALVE-SPRING LIFTER



STUDEBAKER SPECIAL
quickly services Studebaker (Standard and Light Six).

PRICE \$2.50

FORD TYPE . . .	1.30
FORDSON . . .	3.75
Special Jaws for	
HUDSON . . .	1.00
RICKENBACKER	1.00
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Additional in Canada	

"Grif-No" NON-GLARE AUTOMOBILE DASH LIGHT

for
ANY
CAR

With the Adjustable Shutter

ILLUMINATES THE DASH — ELIMINATES THE GLARE

Simple Movement of Revolving Shutter Adjusts Light from Full Flood to Soft, Indirect Lighting of Instruments.

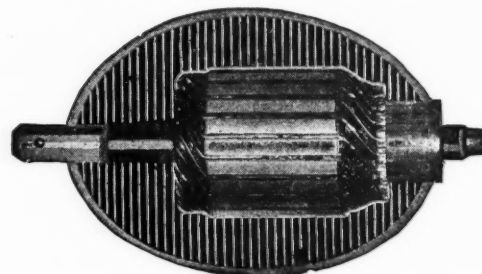
**THE FASTEST SELLING LIGHT
MADE**

DEALERS—Try out one of these attractive display boxes on your counter—ASK YOUR JOBBER.



Retail Price \$1.25

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33 Erie Street
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Steady Business—Big Profits

We take worn out armatures—rewind 'em equal to new—guarantee for 90 days—ship the same day the old one is received. Garagemen earn a neat profit. Free interesting booklet gives the dope—Name and address, please.

FORD Generator Armatures Rewound.....	\$1.50
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ALL OTHER TYPES TWO-UNIT Generator Armatures Rewound.....	3.25
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GUARANTEED to give the same satisfaction as new armatures.

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**FREDERICKS
Rewinding Service**



Still MORE POWER behind KESTER METAL MENDER

The Household Package of Kester Acid Core Solder

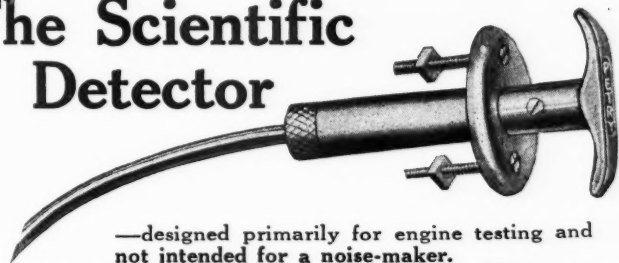
LOOK 'em over—a formidable battery of eighteen state and sectional Farm papers together with the Country Gentleman. This powerfullist carries the Kester message into over 3,120,000 homes per month. It will make sales in a most fertile territory—the rural districts.

Battering down sales resistance on this large scale will mean much to you. Not only will sales on Kester Metal Mender have a healthy rise, but the entire line will feel the stimulus. Are you prepared to meet the increased business? Better check your stock now!

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Originators and World's Largest Manufacturers of Self-Fluxing Solder.

The Scientific Detector



—designed primarily for engine testing and not intended for a noise-maker.

It is a lot easier to interest customers in a Tuning-up Valve—THE ONLY CONVENIENT MEANS OF CHECKING UP ON THE FIRING OF THE CYLINDERS—than in an old fashioned noise-maker.

—and motorists will appreciate, too, the scientific design of the Petry Tuning-up Valve—its freedom from leaks, rattles, accidental opening, and chatter—and its ability to give trouble-free service for the life of a car.

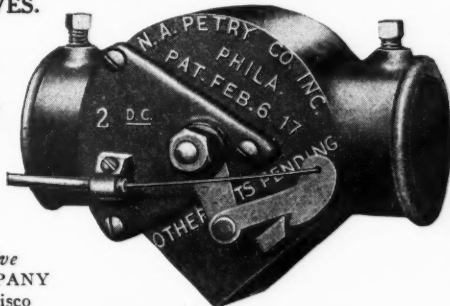
YOU WILL SELL MORE CUT-OUTS IF THEY'RE TUNING-UP VALVES.

**N. A. PETRY
COMPANY**

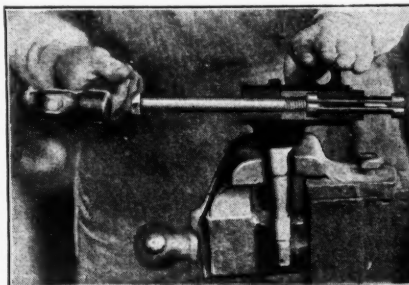
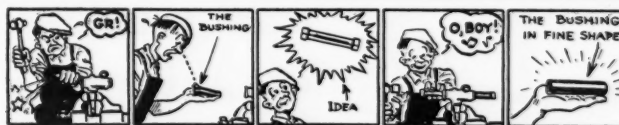
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Philadelphia, Pa.

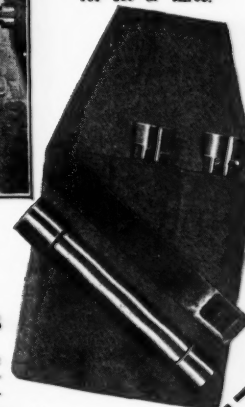
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NORMAN COWAN COMPANY
451 Rialto Bldg., San Francisco



PETRY Tuning Up **Valve**



Three sizes: 1/4", 5/8" and 3/4" All all requirements. \$1.50 any one size. \$4.50 for set of three.



New!
Drives 'em out
—in two minutes

Now, to remove the tightest steel or bronze bushing, simply insert the Dieringer Bushing Remover—Wham it with a hammer—Out comes the bushing in perfect condition!

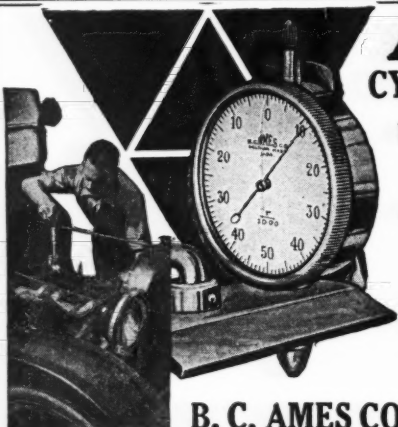
Garagemen everywhere are waiting for this tool—500 were sold on sight in one Ohio city.

Mail this coupon now for the discounts and full information.

Garagemen: Please mention your jobber's name.

DIERINGER
Bushing Remover

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Without obligating me in any way, send
the discounts and full information on
the Dieringer Bushing Remover.
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Address.....



AMES Jr. CYLINDER GAUGE

With Setting Tool Handle

All the time saving facts in a glance at the dial

Price \$17.50

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The "Ideal" Assortment is the best value and a real Automotive Assortment of Cotter Pins. Do not confuse it with a "price lot" of Cotters that some are offering as an Assortment. The "Ideal" Assortment sizes range from 1/16x1/4 in. to 5/32x1 1/4 in. which are Standard sizes for 90 per cent of all automobiles. Packed in a practical size round screw-top container, attractively and fully labeled.

We also make the well known W. W. Assortment in Leatherette covered cases as well as assortments for Agricultural Implements and Hardware requirements. We manufacture all sizes of Cotter Pins—Steel and Brass.

Ask your jobber for the W. W. Line

WESTERN WIRE PRODUCTS COMPANY
St. Louis, Mo.



It has come to be a badge of honor among motorists.

There's a deal of satisfaction in knowing that your auto bumpers, front and rear, are the last word in bumper protection and beauty. You have that feeling if your bumpers have that nameplate.

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Don't Let the Black Hand Kill Your Trade!

Protect your customer's car upholstery and body from grease marks and tool marks.

Black hand marks peeve him and hurt you.

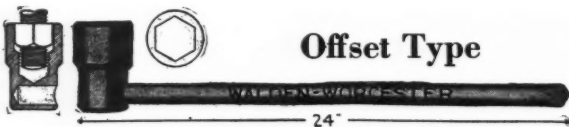
Mechanics can work better and faster with fenders, cowls, radiator, upholstery, etc., covered with **KLEENKAR SHOP COVERS**. Write for folder with samples of materials, etc.

Automotive Fabric Equipment Co.
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Heavy Duty Socket Wrenches




Offset Type


Extra strong construction with extra depth sockets—heat treated.

Plain lacquer finish—twenty-eight standard sizes.

Ask for Catalog No. 400.



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INCORPORATED
WORCESTER, MASS.




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Write for Attractive Discounts

Always Insist Upon Genuine Apex Innerings

Most good Jobbers stock them. If it isn't an Apex—It isn't an Innering.

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Moto Glo can be attached to any size Motor Meter and "Sees at night." Supplied with red, green and amber eyes. The eyes and side windows light up. Complete with socket, bulb and cable. Send for samples and catalogue showing 50 new members.

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Repair Link for Broken Cross Chains

A Flower City Self-Closing Link attached with fingers to loose ends of broken chain closes and locks on first turn of wheel. Stops clanking—saves fender—low-priced. Box of 10 Links retails for 25 cents.

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Distributors wanted.

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Rochester, N. Y.



GE Allsteel

The Complete Line of Office Equipment

THE GENERAL FIREPROOFING CO., Youngstown, Ohio
Dealers Everywhere - Canadian Plant: Toronto, Ontario

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They help you build better batteries because our special process gives them greater capacity—a strong, unfailing current over a longer period of time. The grids used in Pore-Blown Plates are reinforced at the bottom, where the strain is great. All materials used in the paste are pulverized—not just mixed. Send for our complete catalogue on plates and all battery parts.

General Storage Battery Co.
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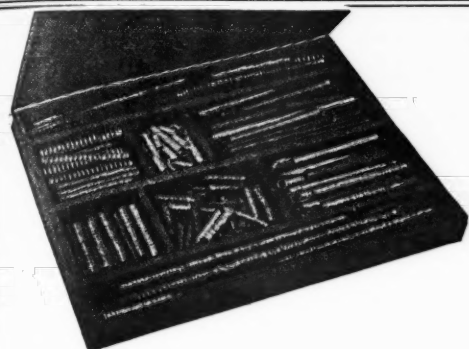


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Fine Fours, Sixes and Eights-In-Line

LYCOMING MFG. CO. **WILLIAMSPORT, PA.**

PECK SPRINGS



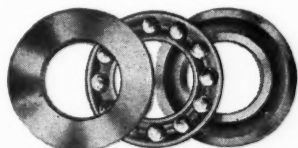
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The Spring You Need When You Need It!

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arranged in compartments for quick, easy handling. If you get only 25c per spring, your profit on this PECK assortment will be \$59.00. A real money-maker for the Dealer and Garage. When ordering direct be sure and mention your Jobber's name.

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MORRISON

Automatic Double Range

Worm Drive JACKS



Special model
for Balloons

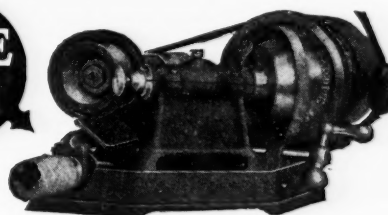
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Flexible steel "Sure Hold" cap prevents dangerous slipping. Long folding handle (36 to 72 in.) operates from standing position. Gets under overhanging bodies. Easy to work. Few turns and it's up. Built in 11 sizes for all service requirements up to 8 tons. Furnished as standard equipment on fine passenger cars, trucks, buses and Fire Apparatus for past 4 years. The Jack for YOUR shop. Write for sample for test.

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Astonishing New Machine for Reclaiming Valves

**FREE
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New Principles! — New Results! — New Price!

This machine in your shop opens the way to larger profits—through saving of time and work and better and more accurate jobs.

It does everything that could be expected of a much higher priced machine, and usually does the work even better because of its many special features. At its low price, you cannot afford to grind the face of valves by hand any longer.

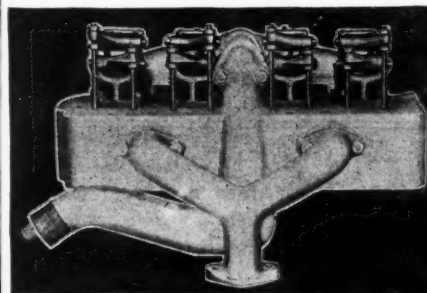
Just let us send you complete description of this wonder-working machine. Drop us a line now.

Price Only
\$85⁰⁰
Complete

This valve refacer not only costs you less than half the usual price of such a machine, but our special terms make it very easy to buy. Under our extended payment plan it practically pays its own way. Write today for our easy terms and FREE Trial Offer.

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Lightning Speed**

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accounts for every labor minute



Prints the year, month, day, hour, minute, A. M. or P. M. at the exact moment the plunger is pressed—like this, for example:

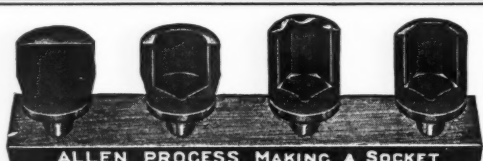
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Absolutely automatic—except for winding. Every machine guaranteed.

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"Established Since 1904"

Cold-Drawn Sockets




ALLEN Wrench Sets

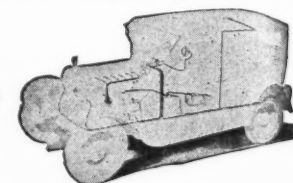
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Packard Cable



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This system has turned a job into an impressive, highly profitable business.

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American Hammered Piston Rings



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MONOGRAM ORIGINAL

SELF LOCKING RADIATOR CAP



THE KINGSLEY-MILLER CO.
(General Automotive Corporation, Chicago)
600 West Jackson Boulevard Chicago

WATERVLIT SPIRAL EXPANSION ALIGNING REAMERS

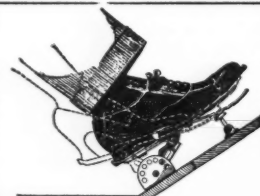
Make piston pins FIT
WILL NOT CHATTER



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Adjusts comfortably and easily to most convenient height for any driver's leg. Foot lies in normal restful, uncramped, safe position. Big, fast seller. Senior, \$3.50. Junior, \$1.25. Ask your jobber.

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More Power Less Fuel

Zenith - Detroit Corporation, Detroit, Mich.


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CUSTOM BUILT

The Kissel Dealer does not meet competition. He makes others meet it.

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For Fords, Chevrolets and Overlands.

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\$1.25 RETAIL

GET TURNER'S SPECIAL OFFER!

It will show you why Turner dealers are so enthusiastic. Get the details of the special offer on this fast selling device. It will obligate you in no way.

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2 IN 1 TIMER

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S. F. BOWSER & CO. Inc.

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ORIGINAL BOSCH units bear the full name, Robert Bosch, and the trade mark shown at left. These are the identifications of Bosch quality—famous since 1887.

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Shows how to get
more work out of
an air compressor.
How to use com-
pressed air for
many pay jobs.

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BRUNNER
AIR COMPRESSORS



EKLA All-Rubber Radiator Hose

—is tough and long-wearing—not easily damaged by heat, oil, vibration or radiator compounds. Sold in cut lengths for Fords and 3-foot lengths, all sizes with inch markings. EKLA prices allow unusual profits to the trade.

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EFFICIENT

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SOLID COPPER
STORE FRONTS

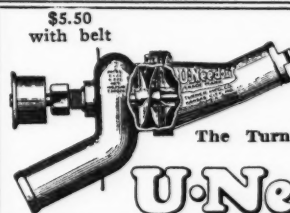
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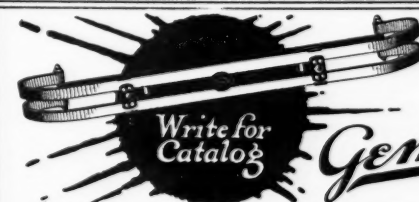
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Pump field—at a new low
price.** Get our dealer plan.

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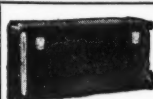
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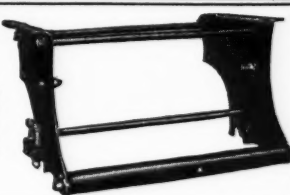
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Simple in design. Light
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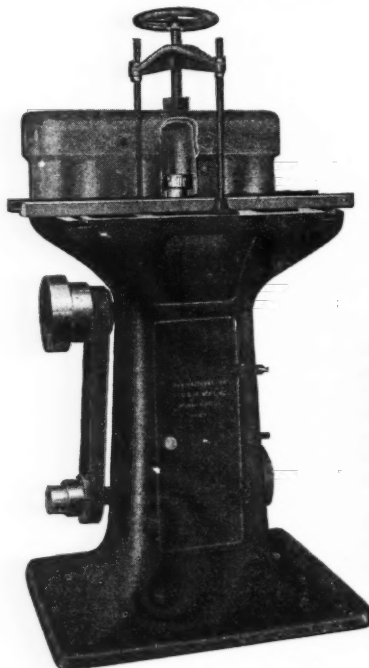
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FOR SALE—Garage, centrally located in growing town; also will transfer contract for most popular automobile agency to purchaser. Box 6237, Motor Age, 5 S. Wabash Ave., Chicago, Ill.

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Model R (shown at left) Total Capacity 2 $\frac{5}{8}$ " to 12" dia. by 20" deep. Special equipment can be furnished for even larger sizes.

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Stormizing machines are built in three sizes. Model R, shown above, is the large size, specially adapted to service stations or machine shops specializing in cylinder reconditioning. With this machine you can handle any size cylinder in the motor field, including stationary and steam engine cylinders. And it bores every size with perfect accuracy.

The low first cost, absolute precision and unusual time saving qualities of the Storm Machine win the everlasting praise of every man who owns one. Before buying cylinder reconditioning equipment for your shop, be sure to see the Storm Machine in action. Get full particulars from your jobber or write direct.

THE BOOK OF FACTS explains cylinder wear

Here's a book that every shop man should have. FACTS explain every kind of cylinder wear with charts actual size. It's a wonderful help for showing customers what's going on inside the motor.

SEND FOR IT—IT'S FREE

STORM

MANUFACTURING COMPANY, INC.
406A SIXTH AVE., S., MINNEAPOLIS, MINN.

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Chilton Class Journal Company

The automotive publishing business has produced a number of brilliant editors and writers, many of whom have since passed out of the picture. Probably the oldest in point of service, and among the best known, is Julian Chase, directing editor of the Chilton Class Journal Company.

Mr. Chase entered the automobile field in 1899, by way of the U. S. Automobile Company, makers of electric vehicles. Later he became sales manager of the automobile department of the Ward Leonard Electric Company. In 1903 and 1904 he sold ignition equipment to car manufacturers. He contributed to *The Horseless Age* during this period and his articles combined with the pioneering experience back of them won for him a place on the staff of that paper as managing editor. From *The Horseless Age* he went to *Motor* of which publication he was editor for nine years, resigning in 1915 to become part owner and editor of *The Horseless Age*.

The Horseless Age, the first automobile journal to be published in the United States, was bought in 1918 by the Class Journal Company and Mr. Chase became business manager of the editorial department, later becoming the directing editor.

The activities of Mr. Chase have been numerous. He has been a member of the Publishing Committee and of the Standards Committee of the S. A. E. and was at one time secretary of the Metropolitan Section. He is president of the National Conference of Business Paper Editors. He is a member of the Committee on Enforcement of the National Conference on Street and Highway Safety and of the Advisory Board for the Dictionary of Specifications of the Department of Commerce.

Mr. Chase is particularly well qualified by both training and experience to direct the editorial work of this great organization. He is a graduate of Brown University, where besides getting his degree in 1899 he set up something of a reputation for himself as a football player. He participated in many of the early automobile endurance contests and speed events winning as a first accomplishment in this line a blue ribbon for a perfect performance in the 1902 Long Island 100 Miles Non-Stop Endurance Contest as well as the prize for lowest gasoline consumption in the same event. On the practical side of his experience in the business which these papers represent he has designed, built, sold and repaired automobiles.

His long contact with and intimate knowledge of the industry gives him an unusual perspective for the proper appraisal of news values. He possesses a combination of qualities which well fit him to direct the editorial activities of the Chilton Class Journal Company.

This is the second of a series of announcements dealing with the editorial strength of Chilton Class Journal publications. Each issue will carry a brief sketch of an editor or principal contributor to the group.

The purpose of this series is to place before you the facts about our editorial work so you may know its scope and magnitude and the ability, experience and attainments of the men whose articles you read in these publications.



WHETHER you can see the name or not—if it has a pedal shaped like this—it's a Williams Accelerator for Ford cars.

And when you're looking at a Williams Accelerator—you're not only looking at the greatest dollar-for-dollar value in Ford foot throttles—

But you're looking at a fine piece of Ford equipment that does more than any other Ford foot throttle—regardless of price.

For instance: Suppose you're driving along with the hand throttle at any setting. You touch the Williams Accelerator. You get instant response. No slack to pick up *anywhere* before the Williams action starts.

Or, if you're driving with the Williams Accelerator. You want to feed the gas with your hand. You don't have to pull down the hand throttle four or five notches to catch up to the foot.

No matter at what speed you are driving with a Williams Accelerator, the hand throttle is always in direct, positive connection.

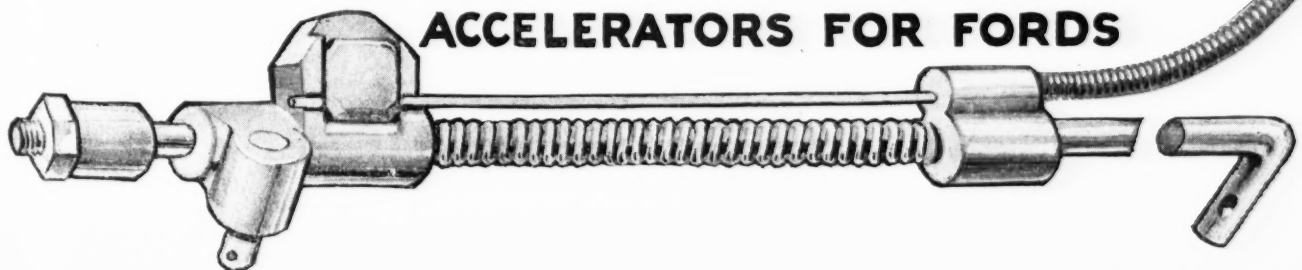
If you want to sell real performance—there's only one answer—Williams Accelerators. Two models. Senior, \$2.50. Junior, \$1.50.

**WILLIAMS BROS.
AIRCRAFT CORP.**

25th and Potrero Avenue SAN FRANCISCO, CAL.

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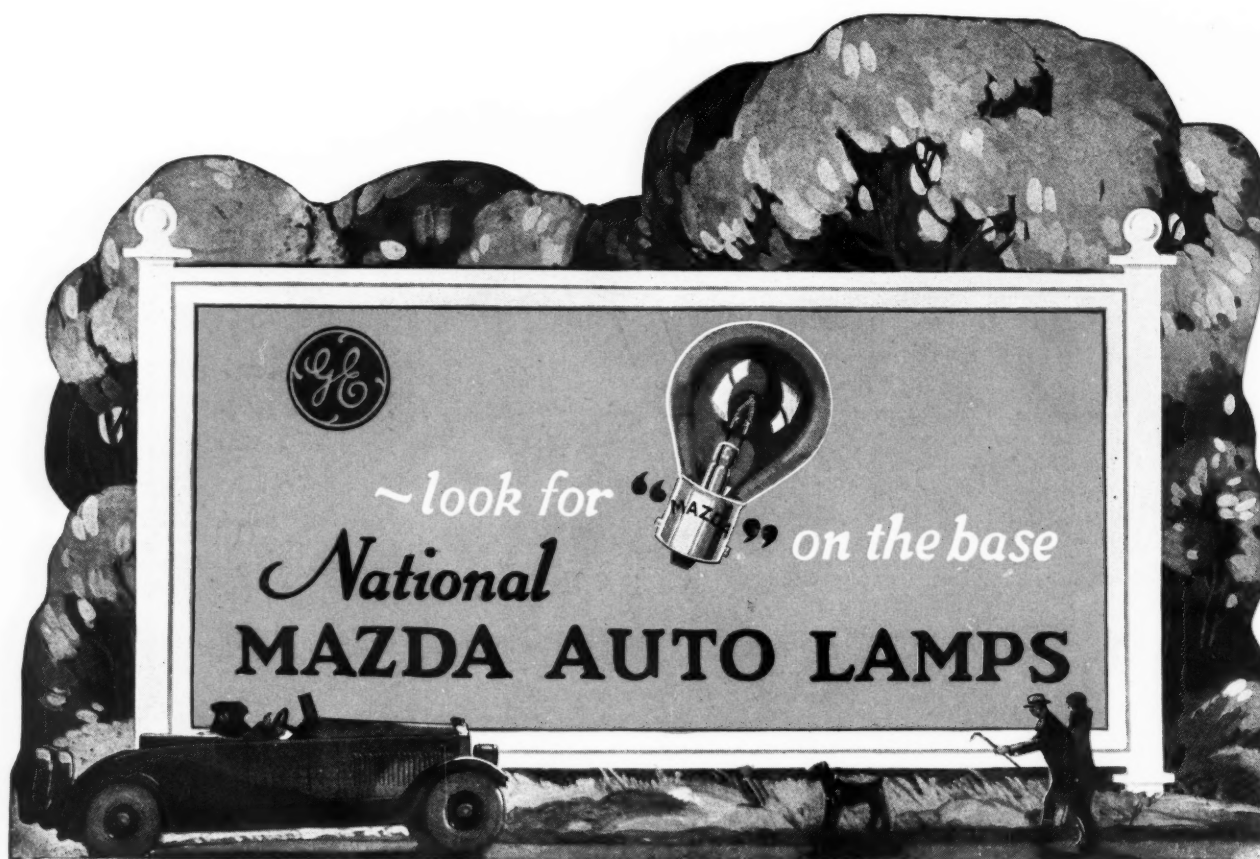
ACCELERATORS FOR FORDS



Telling the Millions

THERE are over 18,000,000 cars in the U. S. whose owners will see these billboards time and time again and have it firmly established in their minds that National MAZDA auto lamps are better—that they cost no more and that lamps with the mark MAZDA on the base are the best auto lamps to buy.

By use of the many merchandising aids which are available to all dealers of National MAZDA auto lamps and well directed sales effort to back up this national advertising you can *sell the millions* and double your auto lamp sales in 1925.



NATIONAL MAZDA
AUTO LAMPS
A GENERAL ELECTRIC PRODUCT

